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NAVMC DIRECTIVE 3500.77

Subj: GROUND ORDNANCE MAINTENANCE TRAINING AND READINESS MANUAL

Ref: (a) MCO P3500.72A
(b) MCO 1553.3A
(c) MCRP 3-0A
(d) MCRP 3-0B
(e) MCO 3500.27A
(f) MCO 3400.3F
(g) MCO 3500.70

1. PURPOSE. Per reference (a), this manual establishes training standards, regulations, and practices regarding the training of Marines and assigned Navy personnel in Occupational Field (OccFld) 21, Ground Ordnance Maintenance.

2. CANCELLATION. MCO 1510.57B, MCO 1510.65B, MCO 1510.66B, MCO 1510.67B, MCO 3501.7A, Section 6B-2.4.

3. INFORMATION

a. The training events in this order will be used to standardize unit training throughout the community, focus on Mission Essential Tasks for the community, and establish a framework for assessment of unit and individual training readiness. It includes unit and individual training standards to be used by unit commanders and formal schools for the development of training plans, curricula, and records of training accomplished in order to establish a framework for identifying training achievements, training gaps, and objective assessments of readiness associated with the training of Marines.

b. CG, TECOM will update this T&R Manual as necessary to provide current and relevant training standards to commanders. Commanders will incorporate these training events into their training plans to the extent the events support their unit's Mission Essential Tasks and to the extent time and other resources are available.

c. All questions pertaining to the Marine Corps T&R Program and Unit Training Management should be directed to CG, TECOM (C 469), 3300 Russell Road, Quantico, VA 22134.

4. SCOPE

a. Commanders will review, update, and submit unit Mission Essential Task List (METL) per references (b) and (c).

b. Per reference (b), commanders shall conduct an internal assessment of the unit's ability to execute each MET and prepare a definitive plan of

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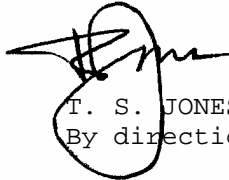
attack to achieve MET proficiency by developing long-, mid-, and short-range training plans to achieve proficiency in each MET.

c. Using this T&R Manual and other pertinent references, commanders will conduct evaluations (informal and formal) of their unit's ability to accomplish their METs. These training evaluations will be conducted at appropriate points in the unit's training cycle to determine MET proficiency and adjust training priorities.

d. Formal school directors and commanders will establish or review programs of instruction to ensure compliance with core individual training requirements as set forth in this Order.

5. COMMAND. This Directive is applicable to the Marine Corps Total Force.

6. CERTIFICATION. This Directive is reviewed and approved this date.



T. S. JONES
By direction

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TABLE OF CONTENTS

CHAPTER

1OVERVIEW
2MISSION ESSENTIAL TASKS
3COLLECTIVE TRAINING
4	.....MOS 2102 INDIVIDUAL TRAINING
5	.....MOS 2110 INDIVIDUAL TRAINING
6	.....MOS 2111 INDIVIDUAL TRAINING
7	.....MOS 2112 INDIVIDUAL TRAINING
8	.....MOS 2120 INDIVIDUAL TRAINING
9	.....MOS 2125 INDIVIDUAL TRAINING
10	.....MOS 2131 INDIVIDUAL TRAINING
11	.....MOS 2141 INDIVIDUAL TRAINING
12	.....MOS 2146 INDIVIDUAL TRAINING
13	.....MOS 2147 INDIVIDUAL TRAINING
14	.....MOS 2149 INDIVIDUAL TRAINING
15	.....MOS 2161 INDIVIDUAL TRAINING
16	.....MOS 2171 INDIVIDUAL TRAINING
17	.....MOS 2181 INDIVIDUAL TRAINING

APPENDIX AREFERENCES
------------	-----------------

CHAPTER 1
OVERVIEW

	<u>Paragraph</u>	<u>Page</u>
INTRODUCTION.....	1010	1-1
CORNERSTONE ORDERS.....	1020	1-1
MISSION ESSENTIAL TASK LIST	1030	1-1
APPLICABILITY.....	1040	1-2
UNIT TRAINING.....	1050	1-2
UNIT TRAINING MANAGEMENT.....	1060	1-2
EVALUATION OF TRAINING.....	1070	1-3
ORGANIZATION.....	1080	1-3
T&R EVENT CODING.....	1090	1-4
T&R EVENT LEVELS	1100	1-5
EVALUATION-CODDED (E-CODED) EVENTS.....	1110	1-5
CRP CALCULATION.....	1120	1-6
T&R EVENT DETAIL.....	1130	1-6
REQUIREMENTS FOR COLLECTIVE TRAINING	1140	1-9
NBC DEFENSE TRAINING.....	1150	1-9
NIGHT TRAINING.....	1160	1-9
APPLICATION OF SIMULATION	1170	1-10
OPERATIONAL RISK MANAGEMENT (ORM).....	1180	1-10
CONCLUSION.....	1190	1-10

1010. INTRODUCTION

1. The Training and Readiness (T&R) Program is intended to become the Corps' primary tool for planning, conducting, and evaluating training, and for assessing training readiness. The Operating Forces and supporting establishment have developed Mission Essential Task Lists (METLs) for ground communities using Marine Corps doctrine, Table of Organization (T/O) missions, Operational Plans, Contingency Plans, and tactics, techniques, and procedures (TTP). T&R Manuals are built around these service-level METLs; all events contained in T&R Manuals relate directly back to this METL. The comprehensive T&R Program ensures the Marine Corps continues to improve its combat readiness by training more efficiently and effectively. Ultimately, this will enhance the Marine Corps' ability to accomplish all assigned missions.

2. The T&R Manual is a single document that seeks to capture the collective and individual training requirements to prepare units to accomplish their combat mission. The T&R Manual is not intended to be an encyclopedia that contains every minute detail of how to conduct training. Instead, it seeks to provide a framework, linked to a myriad of references, in order to provide a baseline to design, conduct, and assess training that Marines must be able to perform in combat. The T&R Manual is a fundamental tool for commanders to build and maintain unit combat readiness. Using this tool, commanders can construct and execute an effective training plan that supports the unit's METL. More detailed information on the Marine Corps Ground T&R Program may be found in reference (a).

1020. CORNERSTONE ORDERS

Guidance for all training and evaluation in the Marine Corps, from entry-level training at the formal schools to advanced Professional Military Education (PME) for senior enlisted and officers, is found in the Cornerstone Orders. All training and evaluation programs throughout the Marine Corps were designed based on the guidance provided in these orders. The Cornerstone Orders are:

- MCO 1553.1B, The Marine Corps Education and Training System
- MCO 1553.2A, Management for Marine Corps Formal Schools and Training Centers
- MCO 1553.3A, Unit Training Management
- MCO P1553.4A, Professional Military Education

1030. MISSION ESSENTIAL TASK LIST

Because the Ground Ordnance Maintenance Community cannot possibly meet every possible training requirement, it must focus its time and resources on meeting the training requirements that are most directly allied to the unit's expected combat missions. Ground Ordnance Maintenance supports fulfillment of its unit's mission through tailoring its training according to the Mission Essential Task List. The three mission essential tasks for Ground Ordnance Maintenance are:

1. Conduct Combat Service Support Ordnance Maintenance Operations.
2. Ensure Physical Security for Ground Ordnance Weapons/Equipment.

3. Perform Ground Ordnance Maintenance Administrative Functions.

Everything that Ground Ordnance Maintenance does must be linked to at least one of the mission essential tasks. Training tasks that do not link to a mission essential task are by definition non-mission critical. These training tasks, while important, do not directly contribute to accomplishing expected combat missions and must be relegated to a lower priority.

1040. APPLICABILITY

This manual applies to Ground Ordnance Maintenance personnel assigned to the Marine Operating Forces and the Marine Supporting Establishment (bases, stations, depots and training or functional commands).

1050. UNIT TRAINING

1. The training of Marines to perform as an integrated unit in combat lies at the heart of the T&R Program. Unit readiness and individual readiness are directly related. Individual training and the mastery of individual core skills serve as the building blocks for unit combat readiness. A Marine's ability to perform critical skills required in combat is essential; however, it is not necessary to have all individuals within an organization fully trained in order for that organization to accomplish its assigned tasks. Manpower shortfalls, temporary assignments, leave, or other factors outside the commander's control, often affect the ability to conduct individual training. Regardless of current manning, the unit must maintain the ability to accomplish its assigned mission.

2. Commanders shall ensure that all tactical training is focused on their combat mission. The T&R manual serves as a tool to help develop the unit's training plan. Tactical training shall support the unit METL and be tailored to meet T&R standards. Commanders at all levels are responsible for effective combat training.

3. Commanders shall provide personnel the opportunities to attend formal and operational level courses of instruction as outlined in this Manual. Attendance at formal courses should enhance the war fighting capabilities of the unit as determined by the unit commander.

1060. UNIT TRAINING MANAGEMENT

1. Unit Training Management (UTM) is the application of the Systems Approach to Training (SAT) and the Marine Corps Training Principles in a manner that maximizes training results and focuses the training priorities of the unit in preparation for the conduct of its wartime mission.

2. UTM focuses training on the tasks that are essential to a unit's wartime capabilities. The SAT process provides commanders with the requisite tools and techniques to analyze, design, develop, implement, and evaluate the training of their unit. The Marine Corps Training Principles provide sound and proven direction and are flexible enough to accommodate the demands of local conditions. They are guides that commanders can use to manage unit-training programs. The Marine Corps training principles are:

- Train as you fight
- Make commanders responsible for training
- Use standards-based training
- Use performance-oriented training
- Use mission-oriented training
- Train the MAGTF to fight as a combined arms team
- Train to sustain proficiency
- Train to challenge

3. In order to maintain an efficient, effective training program, it is imperative that commanders at every level fully understand and implement UTM. Guidance for UTM and the process for establishing effective UTM programs are contained in references (b), (c), and (d).

1070. EVALUATION OF TRAINING

1. Evaluation is a continuous process. Evaluation is integral to training management and is conducted by leaders at every level and during all phases of the planning and conduct of training. Training evaluations measure individual and collective ability to perform events specified in the respective T&R Manuals. To ensure training is efficient and effective, it is imperative that evaluation is an integral part of the training plan.

2. The purpose of formal and informal evaluation is to provide commanders with a process to determine a unit's proficiency in the tasks it must successfully perform in combat. Informal evaluations should be conducted during every training evolution. Formal evaluations are often scenario-based, focused on the unit's METs, based on collective training standards, and usually conducted during higher-level E-coded collective events. All collective training and exercises shall be evaluated against established standards of mission proficiency for identifying and correcting deficiencies. References (a) and (b) provide further guidance on the conduct of informal and formal evaluations utilizing the Marine Corps Ground T&R Program.

1080. ORGANIZATION

1. The Ground Ordnance Maintenance T&R Manual is community-based, written to support Occupational Field 21. The manual is not intended, nor should it be used as a stand-alone document. The manual is organized in three major areas.

a. Chapter 1 is an overview of the Marine Corps's Training and Readiness program. It consists of elements common to all MOSs that are pertinent to successful implementation of a Training and Readiness program. Chapter 1 also outlines the organization and key elements of the Ground Ordnance Maintenance T&R Manual, with an explanation of each key element.

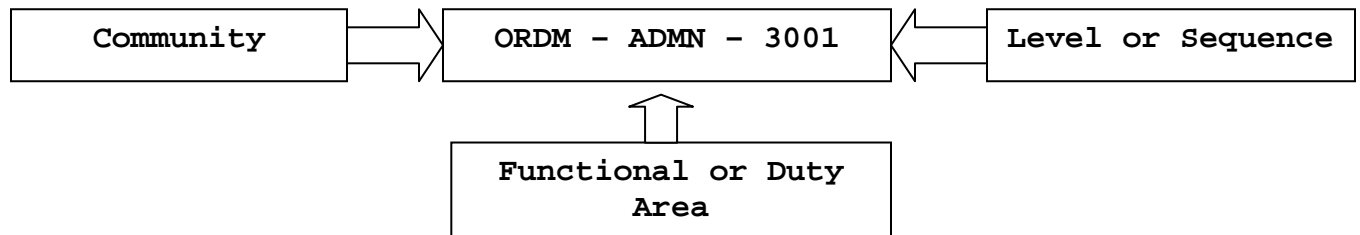
b. Chapters 2 and 3 consist of the Mission Essential Tasks and collective training events for the Ground Ordnance Maintenance Community. Collective Training Events are arranged by event code under the appropriate supported MET.

c. Chapters 4 through 17 consist of the Individual Training Events, arranged by MOS/EVENT CODE. Indexes of events precede each chapter for easy reference.

1090. T&R EVENT CODING

T&R events are coded for ease of reference. Each event has 4-4-4-digit identifier (see figure 1). The first four digits represent the community (e.g. ORDM - Ordnance Maintenance), or the MOS (2146). The second four digits represent the functional or duty area (e.g. ADMN, ORGM, INTM etc.). Functional Areas are listed at the beginning of each chapter. The last four digits represent the level and sequence of the event.

Collective Event



Individual Event

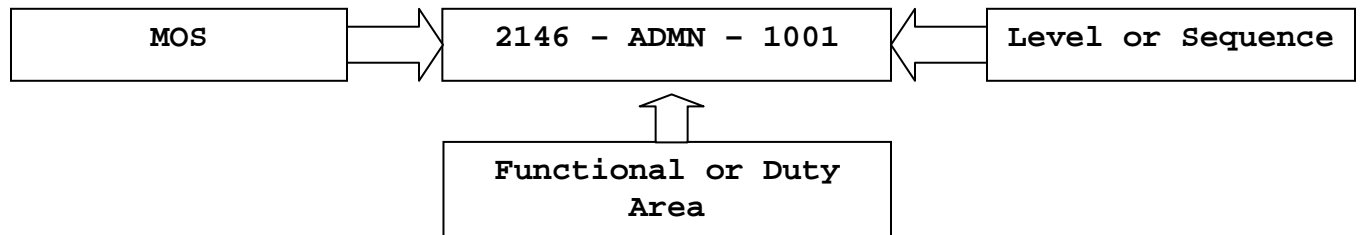


Figure 1: T&R Event Coding

1100. T&R EVENT LEVELS

Event levels in the Ground Ordnance T&R Manual are categorized as 1000 through 5000-level events (see figure 2). 1000-level events are individual training events that are core skills (taught at entry-level formal school). 2000-level events are core plus skills taught through managed on the job training (MOJT) in the operating forces, or at a formal learning center in follow-on schools. 3000-level events are the lowest level collective training standards. These events are performed by two or more Ordnance individuals and are core plus skills performed at the career level. 4000-level events are collective training standards that relate to managing or supervising ordnance functions/activities. They are core plus events performed at the intermediate level. 5000-level events are collective training standards that relate to advising commanders of ordnance related activities. They are core plus events performed at the advanced level.

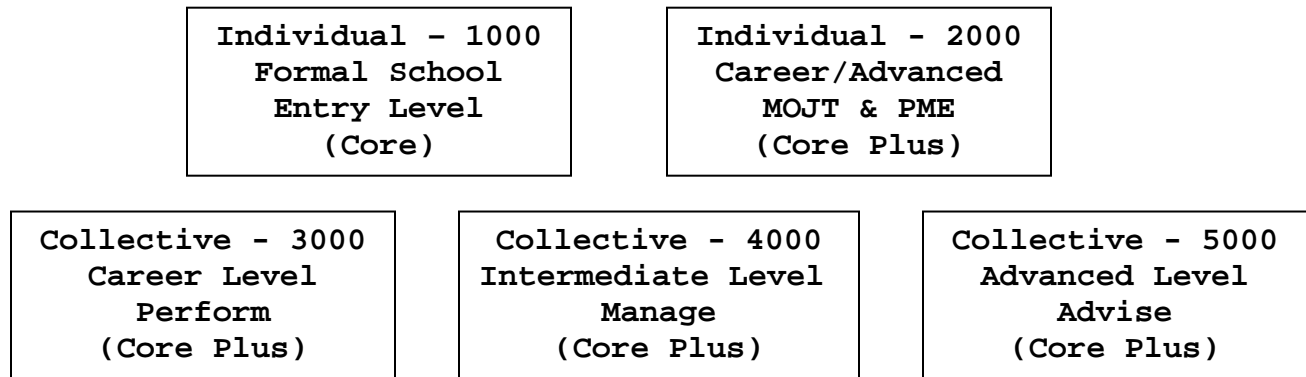


Figure 2: T&R Event Levels

1110. EVALUATION-CODED (E-CODED) EVENTS

1. With limited time and material resources, it is imperative that commanders prioritize training in order to ensure their units are trained in those skills essential to accomplishing their mission. To assist with prioritization, certain events in the T&R manual are Evaluation-Coded (E-Coded). Only significant events (collective or individual) that are critical components of a MET or are key indicators of a unit's readiness are E-coded. Only E-coded events are used to calculate Combat Readiness Percentage (CRP) for each MET.

2. Per reference (b), all commanders in the operating forces are required to develop a unit METL based on the Universal Joint Task List (UJTL), Universal Navy Task List (UNTL), Marine Corps Task List (MCTL), doctrine, T/O mission statement, higher headquarters' METLs, contingency plans and the assigned mission. The use of a METL-based training program allows the commander discretion in training and makes the T&R Manual a training tool rather than a prescriptive checklist.

3. Typically, not all units will have an identical METL, based on environmental factors, roles and missions, and training focus. Therefore, only E-coded events that support a unit's approved METL will be used to calculate CRP. The commander, based on his higher headquarters METL and the assigned mission, develops the METL for the unit. For example, there may be a total of seven METs in the T&R Manual, but only five are on the commander's approved METL for his specific unit. Unit CRP is based on only the five events on the approved METL.

1120. CRP CALCULATION

1. Collective training begins at the 3000 level. Unit training plans shall be designed to accomplish the events that support the unit METL while simultaneously sustaining proficiency in individual core skills. The collective events that are E-coded are the only events that contribute to unit CRP. This is done to assist commanders in prioritizing training toward their unit's METL, taking into account resource, time, and personnel constraints.

2. Unit CRP increases after the completion of E-coded events. The number of E-coded events for the MET determines the value of each E-coded event for that particular MET. All E-coded events have equal value for CRP calculation. For example, if there are four E-coded events for a MET, each is worth 25% of MET CRP. If a MET has eight E-Coded events, then each is worth 12.5%. MET CRP is calculated by adding the percentage of each completed E-coded training event. The percentage for each MET is calculated the same way and all are added together and divided by the number of METS to determine unit CRP. For ease of calculation, we will say that a MET has four E-coded events; each contributes 25% towards the completion of the MET. If the unit has completed three of the four E-coded events for the MET, it has attained 75% CRP for that MET. The CRP for each MET is added together and divided by the number of METS to get unit CRP; unit CRP is the average of MET CRP. For Example:

MET 1: 75% (3 of 4 E-coded events trained)
MET 2: 100% (6 of 6 E-coded events trained)
MET 3: 25% (1 of 4 E-coded events trained)
MET 4: 50% (2 of 4 E-coded events trained)
MET 5: 75% (3 of 4 E-coded events trained)

To get unit CRP, simply add the CRP for each MET and divide by the number of METS:

MET CRP: $75 + 100 + 25 + 50 + 75 = 325$

Unit CRP: $325 \text{ (total MET CRP)} / 5 \text{ (total number of METS)} = 65\%$

1130. T&R EVENT DETAIL

This section explains each of the components of a T&R event. These items will be included in all of the events in each T&R Manual. Community-based T&R Manuals will have several additional components not found in unit-based T&R Manuals.

a. Event Code: The event code is a 4-4-4-character set:

(1) First 4 characters indicate Community (e.g., ORDM - Ordnance Maintenance)

(2) Second 4 characters indicate functional or duty area (e.g. ADMN, ORGM, INTM, etc.)

(3) Third 4 characters indicate the level and sequence (1000 through 5000)

b. Title: The name of the event.

c. Evaluation Coded. This is a "yes/no" category to indicate whether or not the event is E-coded. If yes, the event contributes toward CRP of the associated MET. The value of each E-coded event is based on number of E-coded events for that MET. Refer to Section 104 for a more detailed explanation of E-coded events.

d. Supported MET(s). List all METs that are supported by the training event.

e. Sustainment Interval. This is the period, expressed in number of months, between evaluation and retraining requirements. Skills and capabilities acquired through the accomplishment of training events are to be refreshed at pre-determined intervals. Adherence to these intervals ensures the unit and Marines of the unit maintain proficiency.

f. Grade. List the rank(s) at which Marines are required to complete the event. Each commander has the flexibility to shift responsibilities based on the organization of his command. These grades are based on recommendations from the collective subject matter expertise that developed the manual and are listed for each event.

g. Description: Provide a description of event purpose, objectives, goals, and requirements. It is a general description of an action requiring learned skills and knowledge, i.e., Engage fixed target with crew-served weapons.

h. Condition. The condition(s) set for real world or combat circumstance in which the task is to be performed. They indicate what is provided (equipment, tools, materials, manuals, aids, etc.), environmental constraints or conditions under which the task is performed, and any specific cues or indicators to which the performer must respond. When resources or safety requirements limit the conditions, this should be stated.

i. Standard. The performance standard indicates the basis for judging the effectiveness of the performance. It consists of a carefully worded statement that identifies the proficiency level expected when the task is performed. The standard provides the minimum acceptable performance parameters and must be strictly adhered to. The standard for collective events will likely be general, describing the desired end-state or purpose of the event. The standard for individual events will more specifically describe to what proficiency level, specified in terms of accuracy, speed, sequencing, quality of performance, adherence to procedural guidelines, etc., the event is to be accomplished.

j. Event Components/Performance Steps. Describe the actions composing the event of, or provide a list of subordinate, included T&R event codes and event descriptions. The event components help the user determine what must be accomplished and to properly plan for the event. Event components are used for collective events; performance steps are used for individual events.

k. Prerequisite Events. Prerequisites are academic training or other T&R events that must be completed prior to attempting the task. They are lower-level events or tasks that give the individual/unit the skills required to accomplish the event. They can also be planning steps, administrative requirements, or specific parameters that build toward mission accomplishment.

l. Chained Events. Collective T&R events are supported by lower-level collective and individual T&R events. This enables unit leaders to effectively identify subordinate T&R events that ultimately support specific mission essential tasks. When the accomplishment of any upper-level events, by their nature, result in the performance of certain subordinate and related events, the events are "chained." The completion of chained events will

update sustainment interval credit (and CRP for E-coded events) for the related subordinate level events.

m. Related ITSS. Related Individual Training Standards support the event being described.

n. Initial Training Setting. All individual events will designate the setting at which the skill is first taught, either at formal school (FS), in the Operational Forces as MOJT, or via a distance learning product (DL).

o. References. The training references shall be utilized to determine task performance steps, grading criteria, and ensure standardization of training procedures. They assist the trainee in satisfying the performance standards, or the trainer in evaluating the effectiveness of task completion. Since T&R Manuals provide only a training outline, references are key to developing lesson plans and adding specificity, like performance steps, related doctrine, or other detailed information.

p. Distance Learning Products. (I.e., Individual Multimedia Instruction (IMI), Computer-Based Training (CBT), Marine Corps Institute (MCI), etc. Included when the event can be taught via one of these media methods vice attending a formal course of instruction or receiving MOJT. (NOTE: applicable to Community-based T&R Manuals only).

q. Support Requirements. This is a list of the external and internal support the unit and Marines will need to complete the event. This is a key section in the overall T&R effort, as resources will eventually be tied directly to the training towards METS. Future efforts to attain and allocate resources will be based on the requirements outlined in the T&R Manual. The list includes, but is not limited to:

- Range(s)/Training Area
- Ordnance
- Equipment
- Materials
- Other Units/Personnel

r. Miscellaneous. Provide any additional information that will assist in the planning and execution of the event. The list may include, but is not limited to:

- Admin Instructions
- Special Personnel Certifications
- Equipment Operating Hours
- Road Miles

1140. REQUIREMENTS FOR COLLECTIVE TRAINING

Collective training shall serve to achieve standards of unit proficiency required to accomplish wartime missions. Subject to such constraints as safety requirements and limits on space for training, all collective training shall be conducted under conditions and rates of activity that most closely mirror those the units being trained may encounter in combat. When constraints limit the use of realistic training conditions, simulation and other products of training technology shall be used as applicable to enhance realism. Collective training, to the degree feasible, shall include

electronic warfare activity; nuclear, biological, and chemical defense activity; and the periodic use of opposing forces trained in the tactics of potential adversaries. All collective training exercises shall emphasize realistic performance of the functions of individual personnel in the exercising units. Support units shall be integrated into exercises for realistic training in their wartime supporting roles.

1150. NBC DEFENSE TRAINING

All personnel assigned to the Operating Force must be trained in Nuclear, Biological, and Chemical Defense (NBCD) in order to survive and continue their mission in an NBC environment. Individual proficiency standards are defined as survival and basic operating standards. Survival standards are those that the individual must master in order to survive NBC attacks. Basic operating standards are those that the individual, and collectively the unit, must be capable of performing to continue operations in an NBC environment. In order to develop and maintain the ability to operate in an NBC environment, NBCD training should be an integral part of the training plan and events in this T&R Manual should be trained under NBC conditions whenever possible. Per reference (f), all units must be capable of accomplishing their assigned mission in a contaminated environment. Further guidance on NBCD training can be found in references (f) and (g).

1160. NIGHT TRAINING

While it is understood that all personnel and units of the operating force must be capable of performing their assigned mission in "every clime and place," current doctrine emphasizes the requirement to perform assigned missions at night and during periods of limited visibility. Basic skills are significantly more difficult when visibility is limited. To ensure units are capable of accomplishing their mission at night as well as during the day, they must train under the more difficult limited visibility conditions. All events in this T&R Manual should be conducted during the day and at night or under conditions of limited visibility. Commanders will ensure units are capable of conducting all T&R events under conditions of darkness/limited visibility.

1170. APPLICATION OF SIMULATION

Simulators and other training devices for weapon systems and equipment shall be used when they are capable of effectively and economically supplementing training on the actual equipment. Particular emphasis shall be placed on simulators to provide training that might be limited by safety considerations or constraints on training space, time, or other resources. When deciding on simulation issues, the primary consideration shall be improving the quality of training and consequently the state of readiness. Potential savings in operating and support costs normally shall be an important secondary consideration.

1180. OPERATIONAL RISK MANAGEMENT (ORM)

ORM is a process that enables commanders to plan for and minimize risk while still accomplishing the mission. It is a decision making tool used by Marines at all levels to increase operational effectiveness by anticipating hazards and reducing the potential for loss, thereby increasing the probability of a successful mission. ORM minimizes risks to acceptable levels, commensurate with mission accomplishment. Commanders, leaders, maintainers, planners, and schedulers shall integrate risk assessment in the decision-making process and implement hazard controls to reduce risk to acceptable levels. Applying the ORM process will reduce mishaps, lower costs, and provide for more efficient use of resources. ORM assists the commander in conserving lives and resources and avoiding unnecessary risk, making an informed decision to implement a course of action (COA), identifying feasible and effective control measures where specific measures do not exist, and providing reasonable alternatives for mission accomplishment. Most importantly, ORM assists the commander in determining the balance between training realism and unnecessary risks in training, the impact of training operations on the environment, and the adjustment of training plans to fit the level of proficiency and experience of Marines and leaders. Further guidance for ORM can be found in references (b) and (e).

1190. CONCLUSION

The Marine Corps Ground T&R Program continues to evolve. The vision for this program is that it will link the Uniform Joint Task List (UJTL), the Uniform Navy Task List (UNTL), and the Marine Corps Task List (MCTL) to METLs and unit training, thereby tying all training and training resources directly to unit missions. The Defense Readiness Reporting System (DRRS) is currently being developed and will eventually encompass Enhanced Status of Readiness and Training System (ESORTS). The purpose of this system is to measure and report on the readiness of military forces and the supporting infrastructure to meet missions and goals assigned by the Secretary of Defense. Training readiness in DRRS will be based primarily on METs. With unit CRP based on the unit's training towards its METs, the CRP will provide a more accurate picture of a unit's readiness. This will give fidelity to future funding requests and factor into the allocation of resources. Additionally, the Ground T&R Program will help to ensure training remains focused on mission accomplishment and that training readiness reporting is tied to the commanders' METLs.

CHAPTER 2

MISSION ESSENTIAL TASKS

	<u>Paragraph</u>	<u>Page</u>
SERVICE LEVEL MISSION ESSENTIAL TASKS MATRIX.....	2000	2-1

CHAPTER 2

MISSION ESSENTIAL TASKS

2000. SERVICE-LEVEL MISSION ESSENTIAL TASKS MATRIX

Below is the Service-Level Mission Essential Task List (METL) Table, which includes the designated MET number, title, and evaluation-coded events that support the MET.

MET #1	Conduct Combat Service Support Ordnance Maintenance Operations	
E-Coded Events for MET #1	ORDM-CSSO-3002	Execute embark plan for organizational equipment
	ORDM-CSSO-3004	Establish field maintenance areas and equipment collection points
	ORDM-CSSO-3005	Conduct convoy operations in support of unit missions (day and night)
	ORDM-CSSO-3006	Employ maintenance contact teams
	ORDM-CSSO-3007	Conduct recovery of ordnance weapon systems and equipment
	ORDM-CSSO-3008	Conduct evacuation of ordnance weapons systems and equipment
	ORDM-CSSO-5001	Coordinate distribution of ordnance assets
MET #2	Ensure Physical Security for Ground Ordnance Weapons/Equipment	
E-Coded Events for MET #2	ORDM-SCTY-3011	Employ organic crew served weapons
	ORDM-SCTY-3012	Manage deadly force procedures program
	ORDM-SCTY-3015	Manage the accountability of Ammo and Explosives
	ORDM-SCTY-3016	Conduct rear area security operations
	ORDM-SCTY-3017	Conduct squad/platoon level patrolling in support of rear area security operations
MET #3	Perform Ground Ordnance Maintenance Admin Functions	
E-Coded Events for MET #3	ORDM-ADMN-3021	Perform administrative functions in support of maintenance programs
	ORDM-ADMN-4022	Identify repair parts requirements
	ORDM-ADMN-4023	Coordinate the requisition and distribution of repair parts
	ORDM-ADMN-4026	Manage calibration program
	ORDM-ADMN-4028	Manage publication control program
	ORDM-ADMN-4032	Manage load testing program
	ORDM-ADMN-4034	Manage shop safety program
	ORDM-ADMN-5023	Coordinate and conduct command inspections/programs to enhance equipment/unit readiness
	ORDM-ADMN-5024	Coordinate the acquisition of equipment shortfalls

CHAPTER 3
COLLECTIVE TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	3000	3-1
EVENT CODING.....	3010	3-1
ORDNANCE REQUIREMENTS.....	3020	3-1
INDEX OF COLLECTIVE EVENTS BY LEVEL.....	3030	3-2
INDEX OF COLLECTIVE EVENTS BY FUNCTIONAL AREA.....	3040	3-4
3000 LEVEL COLLECTIVE EVENTS.....	3050	3-6
4000 LEVEL COLLECTIVE EVENTS.....	3060	3-20
5000 LEVEL COLLECTIVE EVENTS.....	3070	3-34

GROUND ORDNANCE MAINTENANCE COLLECTIVE TRAINING

3000. PURPOSE

Chapter 3 contains collective training events for the Ground Ordnance Maintenance community.

3010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with a ORDM indicating that the event is for units in the Ground Ordnance Maintenance Occupational Field.

b. Field two - This field is alpha characters indicating a functional area. In this T&R Manual, the functional areas for collective training events are also the Mission Essential Tasks (METs). The functional areas are:

<u>Code</u>	<u>Description</u>	<u>Example</u>
CSSO	Combat Service Support Operations	ORDM-CSSO-XXXX
SCTY	Security	ORDM-SCTY-XXXX
ADMN	Administrative Functions	ORDM-ADMN-XXXX

c. Field three - This field provides unit level at which the event is accomplished and numerical sequencing;

<u>Level</u>	<u>Job Focus</u>	<u>Number Series</u>	<u>Example</u>
Career	Perform	3000	ORDM-CSSO-3011
Intermediate	Manage	4000	ORDM-ADMN-4001
Advanced	Advise	5000	ORDM-CSSO-5003

3020. ORDNANCE REQUIREMENTS

Ordnance requirements cited in these tasks are drawn from Marine Corps Bulletin (McBul) 8010, Class V(W) Material Allowances for Training and Security.

3030. INDEX OF COLLECTIVE EVENTS BY LEVEL

Event Code	E-Coded	Event	Page
		3000 LEVEL	
ORDM-CSSO-3001		Identify ordnance maintenance support requirements in support of unit missions	3-6
ORDM-CSSO 3002	X	Execute embark plan for organizational equipment	3-7
ORDM-CSSO-3003		Conduct MPF/ATF maintenance inspections in support of off/on load	3-8
ORDM-CSSO-3004	X	Establish field maintenance areas and equipment collection points	3-9
ORDM-CSSO-3005	X	Conduct convoy operations in support of unit missions (day and night)	3-10
ORDM-CSSO-3006	X	Employ maintenance contact teams	3-11
ORDM-CSSO-3007	X	Conduct recovery of ordnance weapon system and equipment	3-12
ORDM-CSSO-3008	X	Conduct evacuation of ordnance weapons systems and equipment	3-13
ORDM-SCTY-3011	X	Employ organic crew-served weapons	3-14
ORDM-SCTY-3012	X	Manage deadly force procedures program	3-14
ORDM-SCTY-3013		Manage physical security procedures for an armory	3-15
ORDM-SCTY-3014		Manage the accountability of arms	3-16
ORDM-SCTY-3015	X	Manage the accountability of Ammo and explosives	3-17
ORDM-SCTY-3016	X	Conduct rear area security operations	3-18
ORDM-SCTY-3017	X	Conduct squad/platoon level patrolling in support of rear area security operations	3-19
ORDM-ADMN-3021	X	Perform administrative functions in support of maintenance programs	3-19
		4000 LEVEL	
ORDM-ADMN-4021		Establish procedures for the security of weapons, tools, and equipment	3-22
ORDM-ADMN-4022	X	Identify repair parts requirements	3-22
ORDM-ADMN-4023	X	Coordinate the requisition and distribution of repair parts	3-23
ORDM-ADMN-4024		Manage radiological program	3-24
ORDM-ADMN-4025		Manage modification control program	3-25
ORDM-ADMN-4026	X	Manage calibration program	3-26
ORDM-ADMN-4027		Manage military occupational specialty (MOS) training program	3-26
ORDM-ADMN-4028	X	Manage publication control program	3-27
ORDM-ADMN-4029		Manage unit oil analysis program	3-28
ORDM-ADMN-4030		Manage unit administrative storage program to support long-term equipment readiness	3-29
ORDM-ADMN-4031		Manage licensing program	3-30
ORDM-ADMN-4032	X	Manage load testing program	3-30
ORDM-ADMN-4033		Manage laser program	3-31
ORDM-ADMN-4034	X	Manage shop safety program	3-32
ORDM-ADMN-4035		Manage tool control program	3-33

		5000 LEVEL	
ORDM-CSSO-5001	X	Coordinate distribution of ordnance assets	3-34
ORDM-ADMN-5021		Draft/Review ordnance policies, directives, regulations and logistics appendices	3-35
ORDM-ADMN-5022		Coordinate assignment of ordnance personnel	3-36
ORDM-ADMN-5023	X	Coordinate and conduct command inspections/ programs to enhance equipment/unit readiness	3-37
ORDM-ADMN-5024	X	Coordinate the acquisition of equipment shortfalls	3-37

3040. INDEX OF COLLECTIVE EVENTS BY FUNCTIONAL AREA

Event Code		Event	Page
		CONDUCT COMBAT SERVICE SUPPORT ORDNANCE MAINTENANCE OPERATIONS	
ORDM-CSSO-3001		Identify ordnance maintenance support requirements in support of unit missions	3-6
ORDM-CSSO 3002	X	Execute embark plan for organizational equipment	3-7
ORDM-CSSO-3003		Conduct MPF/ATF maintenance inspections in support of off/on load	3-8
ORDM-CSSO-3004	X	Establish field maintenance areas and equipment collection points	3-9
ORDM-CSSO-3005	X	Conduct convoy operations in support of unit missions (day and night)	3-10
ORDM-CSSO-3006	X	Employ maintenance contact teams	3-11
ORDM-CSSO-3007	X	Conduct recovery of ordnance weapon system and equipment	3-12
ORDM-CSSO-3008	X	Conduct evacuation of ordnance weapons systems and equipment	3-13
ORDM-CSSO-5001	X	Coordinate distribution of ordnance assets	3-34
		ENSURE PHYSICAL SECURITY FOR GROUND ORDNANCE WEAPONS/EQUIPMENT	
ORDM-SCTY-3011	X	Employ organic crew-served weapons	3-14
ORDM-SCTY-3012	X	Manage deadly force procedures program	3-14
ORDM-SCTY-3013		Manage physical security procedures for an armory	3-15
ORDM-SCTY-3014		Manage the accountability of arms	3-16
ORDM-SCTY-3015	X	Manage the accountability of Ammo and explosives	3-17
ORDM-SCTY-3016	X	Conduct rear area security operations	3-18
ORDM-SCTY-3017	X	Conduct squad/platoon level patrolling in support of rear area security operations	3-19
		PERFORM GROUND ORDNANCE MAINTENANCE ADMIN FUNCTIONS	
ORDM-ADMN-3021	X	Perform administrative functions in support of maintenance programs	3-19
ORDM-ADMN-4021		Establish procedures for the security of weapons, tools, and equipment	3-22
ORDM-ADMN-4022	X	Identify repair parts requirements	3-22
ORDM-ADMN-4023	X	Coordinate the requisition and distribution of repair parts	3-23
ORDM-ADMN-4024		Manage radiological program	3-24
ORDM-ADMN-4025		Manage modification control program	3-25
ORDM-ADMN-4026	X	Manage calibration program	3-26
ORDM-ADMN-4027		Manage military occupational specialty (MOS) training program	3-26
ORDM-ADMN-4028	X	Manage publication control program	3-27
ORDM-ADMN-4029		Manage unit oil analysis program	3-28
ORDM-ADMN-4030		Manage unit administrative storage program to support long-term equipment readiness	3-29

ORDM-ADMN-4031		Manage licensing program	3-30
ORDM-ADMN-4032	X	Manage load testing program	3-30
ORDM-ADMN-4033		Manage laser program	3-31
ORDM-ADMN-4034	X	Manage shop safety program	3-32
ORDM-ADMN-4035		Manage tool control program	3-33
ORDM-ADMN-5021		Draft/Review ordnance policies, directives, regulations and logistics appendices	3-35
ORDM-ADMN-5022		Coordinate assignment of ordnance personnel	3-36
ORDM-ADMN-5023	X	Coordinate and conduct command inspections/ programs to enhance equipment/unit readiness	3-37
ORDM-ADMN-5024	X	Coordinate the acquisition of equipment shortfalls	3-37

3050. 3000 LEVEL COLLECTIVE EVENTS

ORDM-CSSO-3001: Identify ordnance maintenance support requirements in support of unit missions

Evaluation Coded: No

Supported MET(s): 1

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2120, 2125, 2149, and 2181

Grade: MSgt-LtCol

Description: Compile support requirements that adequately establish maintenance capabilities.

Condition: Given the unit T/O&E, operation order, CMR, applicable references and the requirement to support a given unit.

Standard: Maintain ordnance equipment readiness of the supported unit at a minimum of 75%.

Event Components:

1. Identify maintenance float block.
2. Identify required tools.
3. Identify required test sets.
4. Identify required support equipment.
5. Identify CSS support references.
6. Identify and coordinate unit T/O&E review.
7. Identify recovery capabilities.
8. Identify engineer requirements.
9. Identify lift requirements.

Support Requirements:

Range/Training Area: Facility Code 17413, Field Training Area

Related ITS:

2102-ADMN-2001-2018
2110-ADMN-2001-2020
2111-ADMN-1042
2111-ADMN-2002
2120-ADMN-2001-2017
2125-ADMN-2001-2020
2141-CWOP-1004
2141-CWOP-2002
2146-ORGM-1011
2146-INTM-2062
2147-CWOP-1005
2149-ADMN-2006
2149-TECH-2033
2181-ADMN-2003
2181-ADMN-2006
2181-ADMN-2010-2012
2181-ADMN-2014-2015
2181-ADMN-2019

References:

1. MCO P4790.2
2. MCO 4400.150

ORDM-CSSO-3002: Execute embark plan for organizational equipment

Evaluation Coded: Yes

Supported MET(s): 1

Sustainment Interval: 6 months

MOSSs Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: PFC-Maj

Description: Execute embark plans for organizational equipment.

Condition: Provided access to the T/O&E, operations order, embark SOP (if available) and available embarkation assets.

Standard: Arrive at the assigned area with the appropriate equipment to conduct ordnance maintenance.

Event Components:

1. Review embark SOP.
2. Identify organic equipment to be embarked.
3. Develop EDL.
4. Identify and request T/E deficiencies.
5. Identify and prepare containers required for embarkation.
6. Perform weatherproofing to containers and equipment.
7. Identify and embark required PEB.
8. Identify and embark Class IX consumable and repairable blocks.
9. Identify and embark required HAZMAT & POLs.
10. Identify and embark required publications.
11. Consolidate embark plan with adjacent elements/units.
12. Identify and request support (i.e. MHE) equipment required.
13. Provide data for entry into MDSSII.

Related ITS:

2110-ADMN-2016
2120-ADMN-2016
2125-ADMN-2011
2141-ADMN-2091-2092
2141-ADMN-2094-2095
2146-ADMN-2004
2147-ADMN-2094
2149-ADMN-2015
2171-ADMN-2021
2181-ADMN-2015

References:

1. MCO 4030.16
2. MCO 4030.19
3. MCO 4030.25
4. MCO 4030.33

5. MCO 4110.2
6. MCO 4400.16
7. MCO 4600.25
8. MCO 4600.30
9. MCO P4600.14
10. MCO P4610.19
11. MCWP 4-11

ORDM-CSSO-3003: Conduct MPF/ATF maintenance inspections in support of off/on load

Evaluation Coded: No

Supported MET(s): 1

Sustainment Interval: 12 months

MOSS Performing This Event: 2111, 2131, 2141, 2146, 2147, and 2171

Grade: PVT-SSgt

Description: Conduct maintenance checks and services for ordnance equipment loaded aboard MPF ships and in other types of equipment storage pools.

Condition: Given applicable resources, equipment requiring inspection and servicing, and timelines for completion as established by the operations order.

Standard: Ensure equipment readiness of forward deployed assets in accordance with established timelines.

Event Components:

1. Compile a list of equipment requiring servicing.
2. Coordinate assignment of appropriate personnel.
3. Allocate required tools, sets, chests, and kits to conduct maintenance.
4. Conduct maintenance services.
5. Identify repair parts requirements.
6. Acquire required repair parts.
7. Track completion of services.
8. Document completion of all maintenance transactions.
9. Coordinate the distribution of assets with appropriate personnel.

Related ITS:

2110-ADMN-2011
2120-ADMN-2011
2125-ADMN-2012
2146-ORGM-1047
2146-ORGM-1055
2147-CWOP-1006
2181-ADMN-2010

References:

1. Marine Corps Logistics Chain Analysis Team (MCLCAT) Checklist
-

ORDM-CSSO-3004: Establish field maintenance areas and equipment collection points

Evaluation Coded: Yes

Supported MET(s): 1

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Cpl-LtCol

Description: Set up expeditionary field maintenance areas to provide preventative and corrective maintenance on ordnance equipment and facilitate the coordination of equipment collection points as far forward as possible to ensure expeditious equipment evacuation, and/or Battle Damage Assessment and Repair.

Condition: Given appropriate references, equipment, personnel, facilities, and adequate support assets.

Standard: Maintain unit readiness in a field environment at 75% or higher at all times.

Event Components:

1. Perform Leaders Reconnaissance.
2. Set up maintenance shelters.
3. Set up power.
4. Set up climate controlled areas.
5. Establish local security.
6. Establish hazardous material collection point.
7. Establish fuel farm.
8. Identify supply distribution point.
9. Establish primary end item collection point.
10. Identify field maintenance areas.
11. Determine maintenance space requirements.
12. Identify assets for embark.
13. Submit fuel request.
14. Submit requests for ammunition.
15. Submit request for external heavy lift/personnel transportation support.
16. Submit request for external personnel requirements such as generator mechanics, refrigeration mechanics, and communications specialists.

Support Requirements:

Ordnance:

- G955 - Grenade, Hand Violet Smoke M18
- G963 - Grenade, Hand Riot CS M7A3
- A111 - Cartridge, 7.62mm Blank M82 Linked
- G945 - Grenade, Hand Yellow Smoke M18
- A080 - Cartridge, 5.56mm Blank M200 Single Round
- G930 - Grenade, Hand Smoke HC AN-M8
- G950 - Grenade, Hand Red Smoke M18

Range/Training Area: Facility Code 17413, Field Training Area

Equipment: Embark requirements must be taken into account for, but not limited to, all maintenance resources, to include shelters, supply, and personnel.

Physical Security for any items requiring security.

Related ITS:

2102-ADMN-2007
2110-TECH-2034
2141-ORGM-2024-2026
2141-ORGM-2028
2146-ORGM-1011
2146-INTM-2062
2149-TECH-2031
2171-ADMN-2024

References:

1. Applicable TM
2. MCO P4790.1
3. MCO P4790.2

ORDM-CSSO-3005: Conduct convoy operations in support of unit missions (day and night)

Evaluation Coded: Yes

Supported MET(s): 1

Sustainment Interval: 3 months

MOSSs Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: PFC-Major

Description: Conduct day and night convoy operations to move CSS elements from origin to destination while maintaining security and control.

Condition: Provided mission, vehicles, equipment, personnel, and adequate training area.

Standard: Execute convoy operations per the references and OPLAN.

Event Components:

1. Identify required personnel and equipment.
2. Set up communications.
3. Plan route.
4. Plan security.
5. Plan for self-recovery/repair.
6. Prepare convoy brief.
7. Coordinate supporting arms.
8. Conduct rehearsals.
9. Plan immediate actions.
10. Conduct equipment and personnel inspections.
11. Identify rally points.
12. Plan MEDEVAC procedures.
13. Identify and request required logistics support, internal, and

- external (fuel, ammo, water, etc).
14. Plan alternate routes.
 15. Prepare route overlays.

Related ITS:

2102-ADMN-2007
2110-TECH-2034
2120-TECH-2035
2141-CWOP-1008

References:

1. FMFM 2-6
2. FMFM 6
3. MCDP 1-3

ORDM-CSSO-3006: Employ maintenance contact teams

Evaluation Coded: Yes

Supported MET(s): 1

Sustainment Interval: 3 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2147, 2149, 2161, 2171, and 2181

Grade: PFC-Capt

Description: Employ task organized contact to effect on-site repairs of battle damaged ordnance equipment, apply required modifications.

Condition: Provided necessary maintenance resources (equipment and personnel) and forward located inoperative ordnance equipment.

Standard: Repair forward located ordnance equipment to a satisfactory operating level, per the references.

Event Components:

1. Form contact teams based on mission.
2. Assess situation.
3. Identify required equipment.
4. Make liaison with supported unit, HHQ Intel, and Operations sections.
5. Establish and maintain communications.
6. Provide security.
7. Plan route (to and from).
8. Request external support requirements.
9. Submit AAR.
10. Conduct movement to and from site.
11. Maintain security and control during all movements.
12. Perform required maintenance actions or recovery.

Related ITS:

2161-FABR-1041-1046
2161-FABR-2010-2011
2146-CWOP-1001-1006
2141-CWOP-1001-1008
2141-CWOP-2001-2002

2146-ORGM-1011-1056
2146-INTM-1071-1072
2146-INTM-2031-2062
2147-CWOP-1001-1008
2147-CWOP-2001-2002
2147-ORGM-1021-1033
2147-ORGM-2011-2017
2147-INTM-2041-2063
2110-TECH-2034

References:

1. MCWP 4-1
2. MCWP 4-11

ORDM-CSSO-3007: Conduct recovery of ordnance weapons systems and equipment

Evaluation Coded: Yes

Supported MET(s): 1

Sustainment Interval: 6 months

MOSs Performing This Event: 2131, 2141, 2146, 2147, 2149, and 2181

Grade: PVT-MSgt

Description: Conduct battle damage assessment and repair or recovery of unserviceable/inoperative ordnance weapon systems and equipment.

Condition: Provided required recovery assets and a variety of forward located unserviceable ordnance equipment.

Standard: Ensure that unserviceable/inoperative ordnance weapons systems and equipment are recovered, in order to enable the repair and return of serviceable ordnance assets to forward elements.

Event Components:

1. Assess the situation.
2. Establish communications with supported units.
3. Establish communications with recovery teams.
4. Establish collection points.
5. Identify required equipment and personnel.
6. Conduct route reconnaissance.
7. Operate recovery equipment.
8. Provide necessary documentation to equipment owner.
9. Conduct battle damage assessment.
10. Conduct repair.

Related ITS:

2102-ADMN-2007
2110-ADMN-2020
2149-TECH-2031

References:

1. FMFRP 4-34
 2. TI 8005-25/12
-

ORDM-CSSO-3008: Conduct evacuation of ordnance weapons systems and equipment

Evaluation Coded: Yes

Supported MET(s): 1

Sustainment Interval: 6 months

MOSSs Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Pvt-Capt

Description: Conduct evacuation of unserviceable/inoperative ordnance systems and equipment to supporting CSSE.

Condition: Provided required recovery assets and forward located unserviceable ordnance equipment.

Standard: Evacuate forward located ordnance equipment to appropriate maintenance collection areas per the reference.

Event Components:

1. Identify supporting activities.
2. Identify and make liaison with any supporting civilian agencies (DHL, FedEx, Host Nation trucking, etc).
3. Establish and maintain communications with supporting activities.
4. Establish method(s) of evacuation to supporting activities.
5. Identify equipment requiring evacuation.
6. Identify personnel and equipment required.
7. Coordinate with external activities for support (air, sea, heavy lift).
8. Request/Coordinate contact team support.
9. Arrange for replacement/return of evacuated equipment.
10. Replace via Class VII, redistribute, etc).
11. Ensure required documentation/receipts are completed and retained.

Related ITS:

2110-ADMN-2001-2020
2120-ADMN-2001-2020
2125-ADMN-2001-2020
2141-ORGM-1021-2028
2141-INTM-2041-2079
2146-ORGM-1011-1056
2146-INTM-1071-2061
2146-ADMN-2071-2075
2147-ADMN-2091-2092
2147-ADMN-2094-2095
2147-ORGM-1021-2033
2149-ADMN-2001-2017
2171-INTM-1001-2007
2181-ADMN-2001-2022

Reference:

1. MCO 5530.13
-

ORDM-SCTY-3011: Employ organic crew-served weapons

Evaluation Coded: Yes

Supported MET(s): 2

Sustainment Interval: 6 months

MOSS Performing This Event: 2110, 2111, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2171, and 2181

Grade: Pvt-CWO

Description: Employ, emplace and coordinate crew-served weapons.

Condition: Provided organic crew-served weapons, personnel and tactical scenario.

Standard: Provide adequate fire support to CSS elements.

Event Components:

1. Assign crew-served weapons teams.
2. Assign sectors of fire, PDF's, and FPF's.
3. Create range cards and fire plans.
4. Emplace crew served weapons.
5. Identify required equipment for vehicle mounting.
6. Employ vehicle mounted crew served weapons.
7. Incorporate crew served weapons in RAS plan.
8. Perform required PM and function checks.

Support Requirements:

Weapon and Ammunition:

1. M2 .50 cal heavy machinegun
A576 CTG, CAL .50, 4&1 LINKED, F/M2 200 per weapon
2. M240G 7.62mm medium machinegun
A151 CTG, 7.62MM, LINK F/OVRHD FIRE 200 per weapon
3. MK19 40mm grenade machinegun
DODIC Quantity
B542 CTG, 40mm, LINKED, HE DP F/MK19 4 each

Related ITS:

2102-ADMN-2003
2102-ADMN-2007

References:

1. FMFM 2-6
2. FMFM 6
3. MCDP 1-3

ORDM-SCTY-3012: Manage deadly force procedures program

Evaluation Coded: Yes

Supported MET(s): 2

Sustainment Interval: 1 month

MOSSs Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2149, 2171, and 2181

Grade: Sgt-LtCol

Description: Develop/Maintain a program that trains personnel in the proper application of deadly force procedures.

Condition: Given appropriate resources, equipment, and personnel.

Standard: Protect sensitive government property and prevent the inappropriate use of deadly force by guard personnel.

Event Components:

1. Conduct deadly force briefs.
2. Conduct deadly force training.
3. Obtain equipment to train individuals/units.
4. Conduct testing of the levels of deadly force.
5. Identify the level of classification of security material being protected.
6. Understand Rules of Engagement if applicable.

Support Requirements:

Range/Training Area:

1. Facility Code 17530, Record Fire Range Non-Automated
2. Facility Code 17570, Pistol Known Distance (KD) Range
3. Facility Code 17550, Rifle Known Distance (KD) Range
4. Facility Code 17320, Training Aids Center

Equipment:

782 gear
Flak jacket
Kevlar
Individual weapon system/crew-serve weapon system
Note taking gear
Appropriate uniform

Related ITS:

2102-ADMN-2008
2110-ADMN-2019
2125-ADMN-2015

References:

1. MCO 5500.6F

ORDM-SCTY-3013: Manage physical security procedures for an armory

Evaluation Coded: No

Supported MET(s): 2

MOSSs Performing This Event: 2102, 2110, 2111, 2120, 2125, 2149, 2171, and 2181

Grade: Sgt-LtCol

Sustainment Interval: 1 month

Description: Provide physical security for arms during the standard business day and during field exercises; ensure adequate security is in place when the armory is closed.

Condition: Given resources, equipment, facilities, and personnel.

Standard: Prevent physical loss of arms and ammunition.

Event Components:

1. Appoint armory guard/duty.
2. Maintain security ammunition.
3. Coordinate reactionary training drills.
4. Coordinate with MPs to ensure IDS systems are working properly.

Related ITS:

2102-ADMN-2008
2110-ADMN-2019
2111-ADMN-2000
2111-ADMN-2002
2111-SCTY-1031-1034
2120-ADMN-2007
2120-ADMN-2010
2120-ADMN-2019
2125-ADMN-2019
2171-ADMN-2025
2181-ADMN-2019

References:

1. MCO 5500.6
2. MCO P4400.150
3. MCO P5530.14
4. MCO 4340.1
5. MCO 8300.1
6. OPNAVINST 5530.13
7. TM 4700-15/1
8. Current ALMARS
9. Current MARADMINs

ORDM-SCTY-3014: Manage the accountability of arms

Evaluation Coded: No

Supported MET(s): 2

Sustainment Interval: 1 month

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2149, 2171, and 2181

Grade: Pvt-LtCol

Description: Conduct inventories as required and provide guidance to the commander, S4, and supply personnel on specific arms accountability procedures as outlined in the directives.

Condition: Given the applicable resources.

Standard: Maintain 100% weapons accountability at all times and provide an accurate audit trail of all arms transactions.

Event Components:

1. Conduct daily sight counts (open/close).
2. Coordinate with Supply/S4 to ensure that required monthly-serialized inventories are being conducted by disinterested 3rd parties.
3. Coordinate with Supply to ensure CRANE reporting is being conducted.

Support Requirements:

Rooms/Buildings: Armory

Related ITS:

2102-ADMN-2008-2009

2125-ADMN-2019

2181-ADMN-2019

References:

1. MCO 4610.15
2. OPNAVINST 5530.13

ORDM-SCTY-3015: Manage the accountability of ammunition and explosives

Evaluation Coded: Yes

Supported MET(s): 2

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2111, 2120, 2149, 2171, and 2181

Grade: Cpl-LtCol

Description: Develop/Maintain a program that accounts for all Ammunition and Explosive (A&E) items within the unit.

Condition: Given security ammunition and emergency explosives, an armory, and appropriate references.

Standard: Account for, properly store, issue, and maintain all A&E assets.

Event Components:

1. Coordinate ammo expenditure reports.
2. Identify the procedures for tracking security ammunition through an active, traceable audit trail.
3. Manage ammo-handling procedures.
4. Manage AA&E screening and qualification program.
5. Manage security ammunition.
6. Evaluate armory facility/storage area for compliance with physical security references.
7. Identify requirements for transportation and storage of AA&E.
8. Identify procedures for reporting MLSR.

Related ITS:

2102-ADMN-2008
2181-ADMN-2019

References:

1. MCO 4610.15
2. OPNAVINST 5530.13

ORDM-SCTY-3016: Conduct rear area security operations

Evaluation Coded: Yes

Supported MET(s): 2

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Pvt-LtCol

Description: Plan and conduct rear area security operations IAW threat level to detect and counter enemy actions while maintaining CSS operations.

Condition: Provided training area, tactical scenario, equipment, and personnel.

Standard: Provide adequate rear area security for CSS area commensurate with threat level.

Event Components:

1. Estimate enemy situation (SALUTE).
2. Estimate situation.
3. Assign & place automatic weapons.
4. Construct barriers and fortifications.
5. Assign security roles to personnel.
6. Identify reactionary force roles.
7. Rehearse immediate action drills.
8. Conduct security patrols.
9. Coordinate supporting arms.
10. Establish communications; internal and supporting.
11. Establish entry control point(s).
12. Assign sectors of fire.
13. Build bunkers.

Related ITS:

2125-ADMN-2001
2141-CWOP-1001
2141-CWOP-1003
2141-CWOP-1005

References:

1. FMFM 2-6
 2. FMFM 6
 3. MCDP 1-3
-

ORDM-SCTY-3017: Conduct squad/platoon level patrolling in support of rear area security operations

Evaluation Coded: Yes

Supported MET(s): 2

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Pvt-LtCol

Description: Plan and conduct squad/platoon level patrols IAW threat level to detect and counter enemy actions while maintaining ordnance maintenance operator operations.

Condition: Provided training area, tactical scenario, equipment and personnel.

Standard: Provide squad/platoon patrols in support of rear area security for CSS area commensurate with threat level.

Event Components:

1. Assign patrol routes.
2. Train personnel.
3. Conduct rehearsals.
4. Establish communication and signals (with comm).
5. Establish communication and signals (without comm).
6. Coordinate supporting fires.
7. Establish med-evac procedures.
8. Identify rules of engagement.
9. ID procedures to re-enter friendly lines (normal and emergency).

Related ITS:

2102-ADMN-2008-2009
2125-TECH-2031
2141-CWOP-1001
2141-CWOP-1003
2141-CWOP-1005
2141-CWOP-1007-1010

References:

1. MCWP 3-11.3
2. FMFM 6-5

ORDM-ADMN-3021: Perform administrative functions in support of maintenance programs

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: PVT-LtCol

Description: Coordinate assignment of ordnance equipment to specific maintenance programs and complete forms as required to document support actions.

Condition: Provided with ordnance equipment and applicable resources, maintenance program references, SOPs, and commander's intent.

Standard: To ensure long-term supportability of ordnance weapons systems and equipment.

Event Components:

1. Joint Oil Analysis Program (JOAP).
2. Corrosion Prevention and Control (CPAC) Program.
3. Physical security program.
4. Safety program.
5. Hazardous materials/Waste programs.
6. Layettes management.
7. PM/CM programs.
8. Demilitarization programs.
9. New equipment fielding programs.
10. Embark programs.
11. Support equipment and TMDE programs.
12. Related programs (PQDR, SDR RODS, 10772, ETC.).
13. Load testing programs.
14. Publication control.
15. Armory procedures.
16. Maintenance training.
17. Arms, Ammunition, and Explosive management programs.

Chained Events:

ORDM-ADMN-5023

ORDM-ADMN-5024

Related ITS:

2102-ADMN-2001-2018
2110-ADMN-2001-2020
2111-ADMN-1041-1042, 1047, 2002
2111-WPNS-1001
2111-SCTY-1033
2112-WPNS-2041
2120-ADMN-2001-2020
2125-ADMN-2001-2020
2131-ADMN-1011-1015
2131-ORGM-1001-1002
2141-ADMN-2091-2093
2141-ADMN-2095
2141-CWOP-1001, 1004
2141-CWOP-2002
2146-ADMN-2001-2002, 2004
2146-INTM-2062
2146-ORGM-1011
2147-ADMN-2091-2092, 2094
2147-CWOP-1005-1006
2149-ADMN-2001-2021
2161-ADMN-1061-1062

2161-ADMN-2021-2025
2171-ADMN-2021-2026
2181-ADMN-2001-2022

References:

1. Current MARADMINS
 2. MCO P4790.2
 3. UM 4790-5
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3060. 4000 LEVEL COLLECTIVE EVENTS

ORDM-ADMN-4021: Establish procedures for the security of weapons, tools, and equipment

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 24 months

MOSS Performing This Event: 2102, 2110, 2111, 2120, 2125, 2149, 2171, and 2181

Grade: PVT-LtCol

Description: Establish procedures to maintain accountability and control of weapons, tools, and equipment.

Condition: Provided a CSS site, weapons, tools, and maintenance equipment.

Standard: Ensure that weapons and equipment are issued, retrieved, and accounted for during all phases of the operation.

Event Components:

1. Identify security levels required by equipment type.
2. Identify security personnel.
3. Establish CSS security.
4. Establish accountability procedures for equipment (equipment logs, ECR's, individual CMR's).
5. Establish armory facility.
6. Assign equipment to authorized personnel.

Related ITS:

2110-TECH-2034
2111-SCTY-1031-1034
2171-ADMN-2025
2102-ADMN-2008
2110-ADMN-2019
2120-ADMN-2019
2125-ADMN-2019
2181-ADMN-2019

Reference:

1. MCO 5530.13
-

ORDM-ADMN-4022: Identify repair parts requirements

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Sgt-LtCol

Description: Identify, procure, document, and utilize required repair parts and secondary repairable items in support of unit operations.

Condition: Given an operational order, EDL, Table of Equipment, assigned equipment, and personnel, past mission historical data, after action reports, and required publications.

Standard: To enable the timely repair of forward deployed ordnance weapons systems and equipment in support of unit operations.

Event Components:

1. Review historical data and Class IX consumable and repairable parts.
2. Based on the operation and equipment density list, determine appropriate class IX quantities.
3. Review after action reports to highlight previous mission problem areas.

Chained Events:

ORDM-ADMN-4023
ORDM-ADMN-3021

Related ITS:

2102-ADMN-2007
2120-ADMN-2007
2120-ADMN-2012
2149-ADMN-2005
2161-ADMN-2022
2181-ADMN-2017

References:

1. DLA Handbook
2. MCDP 4
3. MCO 4733.1
4. MCO P4400.150
5. MCO P4790.1
6. MCO P4790.2
7. MCWP 4-11
8. TM 4700-15/1

ORDM-ADMN-4023: Coordinate the requisition and distribution of repair parts

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Sgt-LtCol

Description: Coordinate with the unit MMO and Supply to comply with requisition procedures for repair parts and ensure that personnel are familiar with those procedures. Once parts are received, coordinate the distribution of those parts to the mechanic who can complete the repairs.

Condition: Given a mission statement, T/O&E, and operations order.

Standard: To ensure requisitions are processed per operations order and, once requisitions are received, they are applied to the appropriate equipment.

Event Components:

1. Consider units to be supported.
2. Establish supply module.
3. Set up layette bins.
4. Consider terrain.
5. Coordinate with MMO to establish commodity representatives.
6. Administration (MIMMS).

Related ITS:

2120-ADMN-2007
2120-ADMN-2012
2149-ADMN-2005
2181-ADMN-2017

References:

1. DLA Handbook
2. MCDP 4
3. MCO 4733.1
4. MCO P4400.150
5. MCO P4790.1
6. MCO P4790.2
7. MCWP 4-11
8. TM 4700-15/1

ORDM-ADMN-4024: Manage radiological program

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 18 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2171, and 2181

Grade: SSgt-LtCol

Description: Identify the proper care, handling, disposal, and reporting procedures for items containing radiological materials.

Condition: Given appropriate references and equipment containing radiological materials.

Standard: Minimize the effects of radiological exposure from the misuse/handling of items containing radiological materials and comply with current reporting requirements of radiological equipment references.

Event Components:

1. Review unit T/E to identify TAM items that contain radioactive materials.
2. Review appropriate references for proper handling and disposal.
3. Follow applicable reporting procedures.

Related ITS:
2111-ADMN-1041

Reference:
1. MCO 5104.3

ORDM-ADMN-4025: Manage modification control program

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Cpl-Capt

Description: Develop and manage a modifications control program based on the units T/E.

Condition: Given unit T/E, SL-1/2, and PLMS, and unit's publications library.

Standard: Apply required modifications, document modification actions and ensure equipment operates according to the modification applications.

Event Components:

1. Review unit T/E to determine equipment within a unit.
2. Review SL-1-2 to determine which mods are needed per each TAM item within that unit.
3. Review Publications library to ensure all applicable MI's are on hand.
4. Verify that all modifications required per each TAM item, are either completed or on order.
5. Ensure that Modifications control forms are properly completed.
6. Ensure all records are properly filed.

Related ITS:
2110-ADMN-2013
2120-ADMN-2013
2125-ADMN-2013
2141-ORGM-2027
2149-ADMN-2012
2181-ADMN-2012

References:
1. Applicable MI
2. MCO P4790.2
3. MIL-HDBK-61A(SE)
4. MIL-STD-2549
5. SL-1-2
6. TI 5600-15/7
7. TM 4700-15/1

ORDM-ADMN-4026: Manage calibration program

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 12 months

MOSs Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Cpl-Capt

Description: Identify all Test Measuring and Diagnostic Equipment (TMDE) requiring calibrations, submit assets for calibration, and conduct management of the program for future requirements. Implement procedures that reduce the threat of fraud, waste, and abuse. Ensure proper use of support equipment for organic assets.

Condition: Given organic tools, equipment, TMDE, and applicable references.

Standard: Ensure equipment is maintained in accordance with guidelines established for the management of support equipment and TMDE.

Event Components:

1. Validate T/E to determine equipment requirements.
2. Identify equipment requiring calibration.
3. Implement tool control procedures.

Related ITS:

2102-TECH-2001
2141-CWOP-2002
2146-ORGM-1011
2146-INTM-2062
2147-CWOP-1005
2171-ADMN-2021

References:

1. MCO 4733.1
2. TI 4733-15/11
3. TI 4733-15/1

ORDM-ADMN-4027: Manage Military Occupational Specialty (MOS) Training Program

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 12 months

MOSs Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Cpl-Capt

Description: Develop and manage an MOS training program IAW unit's mission, T/O, ITSS, collective events, and directives providing procedures and guidance to establish and conduct MOS training in support of unit operations.

Condition: Given a unit T/O, unit METs, ITS's, and personnel of Ground Ordnance Maintenance MOSs.

Standard: Ensure properly trained personnel are available to perform assigned missions.

Event Components:

1. Determine maintenance capability by reviewing T/O&E mission statements.
2. Identify individual MOSs by reviewing unit T/O.
3. Extract ITSs for each particular MOS within unit.
4. Develop training plan to accommodate unit's METs.
5. Train individuals.

Support Requirements:

Equipment: Binders and shelves

Other: T/O&E, current PLMS

Related ITS:

2102-ADMN-2014
2110-ADMN-2005
2120-ADMN-2005
2125-ADMN-2005
2149-ADMN-2004
2181-ADMN-2004

References:

1. MCO 1510 Series, Individual Training Standards for all MOS
2. MCO 1553.3
3. MCO P4790.2
4. MCRP3-0A
5. MCRP 3-0B

ORDM-ADMN-4028: Manage Publication Control Program

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: Quarterly

MOSs Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Cpl-Capt

Description: Provide a publications library to research information required to support maintenance actions.

Condition: Given a unit T/O and T/E, unit mission requirements, and access to PLMS.

Standard: The library should be capable of rapid deployment and contain TMs, TIs, MIs, SIs, SLs, and other pertinent directives as required by unit missions and in accordance with criteria outlined in MCO P4790.2.

Event Components:

1. Review Unit T/E.
2. Identify required publications by reviewing SL-1-2/SL-1-3.
3. Review publications library to assure that all publications and changes are needed and required.
4. Request and validate publications that are required.
5. Implement changes and organize library per the references.

Related ITS:

2111-ADMN-2002
2131-ADMN-1015
2149-ADMN-2010
2171-ADMN-2021
2181-ADMN-2003

References:

1. MCO P4790.2
2. MCO P5215.1
3. MCO P5215.17
4. MCO P5600.31
5. SL 1-2
6. SL 1-3
7. UM-MCPDS
8. UM-PLMS
9. MCPCL CD

ORDM-ADMN-4029: Manage unit oil analysis program

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2110, 2120, 2141, 2146, 2147, 2149, and 2181

Grade: Cpl-CW02

Description: Identify all ordnance equipment that qualifies for placement in the Joint Oil Analysis Program (JOAP), assign those assets to the program, and manage the program in support of unit missions.

Condition: Given appropriate references and access to the unit T/E, CMR, and JOAP references.

Standard: Prevent catastrophic engine failures through oil analysis and reduce the long-term maintenance cost of ordnance vehicles.

Event Components:

1. Identify items requiring induction into JOAP by reviewing unit T/E and appropriate references.
2. Conduct oil sampling per the references.
3. Record and maintain records for JOAP per the references.
4. Identify shipping and handling procedures for JOAP per the references.
5. Take appropriate action based on sampling analysis.

Related ITS:

2110-TECH-2036
2120-ADMN-2012
2141-CWOP-1001
2141-ORGM-1024
2141-ORGM-1025
2146-ORGM-1012
2146-ORGM-1042
2147-CWOP-1006
2149-TECH-2033

References:

1. MCO 4731.1
2. TI 4731-14/1C
3. TM 4700-15/1

ORDM-ADMN-4030: Manage unit administrative storage program to support long-term equipment readiness

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2120, 2125, 2149, and 2181

Grade: MSgt-Maj

Description: Place designated equipment into administrative storage programs as required and manage the scheduling of maintenance tasks required for items in the program.

Condition: Given applicable reference, commander's intent, appropriate storage facility, and equipment designated for administrative storage.

Standard: Provide mission capable ordnance equipment in support of long-term equipment readiness.

Event Components:

1. Establish/Review/Update local SOPs regarding the Administrative Storage Program.
2. Identify procedures to induct equipment into the Administrative Storage Program.
3. Induct equipment into the Administrative Storage Program.
4. Identify, update, and properly code Administrative Storage Candidates.
5. Ensure Items inducted into the Administrative Storage Program do not exceed timelines in accordance with the reference.

Related ITS:

2111-ADMN-1042
2111-SCTY-1033
2131-ADMN-1014
2141-CWOP-1004
2141-ORGM-2026
2146-ADMN-2002

References:

1. MCO P4790.2

ORDM-ADMN-4031: Manage licensing program

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2141, 2146, 2147, and 2149

Grade: Sgt-Capt

Description: Develop and manage a Licensing Program to properly log, examine, and certify ordnance vehicle operators in the performance of their duties. Identify individuals that need Ordnance Vehicle Operators Licenses and develop a program to effectively train, test, and track individuals.

Condition: Given applicable references, personnel requiring licensing, and specific ordnance vehicles.

Standard: Accurately develop and manage a Licensing Program to accommodate unit requirements.

Event Components:

1. Review T/O and T/E to determine equipment that requires licensed operators.
2. Assign licensing officer/SNCO and test examiners.
3. Log and maintain records of individuals licensed.
4. Provide written testing and operator training.

Related ITS:

2110-TECH-2035
2141-CWOP-1003
2146-CWOP-1001
2147-CWOP-1002

References:

1. MCO 8400.6
2. TM 4700-15/1

ORDM-ADMN-4032: Manage load testing program

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2141, 2146, 2147, and 2149

Grade: Sgt-Capt

Description: Develop and manage a load-testing program to accommodate a specific unit by identifying equipment requiring load-testing certification.

Condition: Given a unit T/E, CMR, and appropriate references.

Standard: Reduce the risk of load lifting/bearing hazards in the work place and comply with current directives.

Event Components:

1. Identify the references and components for a load-testing program.
2. Identify frequencies for load testing equipment.
3. Inspect, record, and maintain record jackets and documents.
4. Identify equipment required to be load tested.
5. Conduct an annual load test certification.

Related ITS:

2110-ADMN-2015
2141-ORGM-1022
2141-ORGM-2021
2146-CWOP-1004
2146-ORGM-1030
2146-ORGM-1055
2147-ORGM-2019
2147-ORGM-2021

References:

1. MCO P11262.2
2. MCO P4790.2
3. NAVFAC P307
4. TM 4700-15/1

ORDM-ADMN-4033: Manage laser program

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2111, 2120, 2125, 2171, and 2181

Grade: Sgt-Capt

Description: Develop and manage a laser safety program in support of unit operations.

Condition: Given a unit T/E and appropriate references.

Standard: Reduce the threat of laser injuries in the workplace.

Event Components:

1. Review unit T/E and identify all equipment within a particular unit containing lasers.
2. Identify classifications of lasers within a unit.
3. Identify equipment markings to determine if equipment contains a laser or is a potential radiation safety hazard.
4. Identify laser/radiation safety references.
5. Identify the procedures to respond to a laser injury or a radiological incident.

Related ITS:

2171-INTM-1008-1009

References:

1. ANSI Z136.1
2. MCO 5104.1A
3. MCO 5104.3
4. MCO P4790.2
5. TI 5104-15/2

ORDM-ADMN-4034: Manage shop safety program

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: PVT-Capt

Description: Ensure compliance with published safety orders and directives in developing and maintaining maintenance operations in support of unit missions.

Condition: Given a work environment, personnel and equipment, and appropriate references.

Standard: Reduce and/or eliminate the risk of injury to maintenance personnel while performing required unit missions.

Event Components:

1. Identify that a units particular needs (hardhats, safety boots, safety goggles, MSDS's etc.) are met.
2. Ensure references and resources/protective equipment are available.
3. Implement ORM into unit's daily routine (ORM charts posted in work spaces).
4. Provide required training.

Related ITS:

2110-ADMN-2015
2111-ADMN-1042
2120-ADMN-2015
2125-ADMN-2015
2131-ADMN-1011
2149-ADMN-2014
2161-ADMN-1061
2171-ELEC-1001
2181-ADMN-2014

References:

1. 29CFR 1910.1200
2. Current ALMARS
3. Current MARADMINs
4. MCO 5100.19

5. MCO 5100.29
6. MCO 5100.30
7. MCO 6260.1
8. MCO P4790.2
9. MCO P5100.8
10. MCO P5102.1
11. NAVMC 2692

ORDM-ADMN-4035: Manage tool control program

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2111, 2112, 2120, 2125, 2131, 2141, 2146, 2147, 2149, 2161, 2171, and 2181

Grade: Cpl-Capt

Description: Implement procedures for tool control that reduce the threat of fraud, waste, and abuse.

Condition: Given organic tools, equipment, and applicable references.

Standard: Ensure tool accountability is maintained in accordance with established guidelines.

Event Components:

1. Validate T/E to determine equipment requirements.
2. Implement tool control procedures.

Related ITS:

2102-TECH-2001
2141-CWOP-2002
2146-ORGM-1011
2146-INTM-2032
2147-CWOP-1005
2171-ADMN-2021

References:

1. MCO P4790.2C
 2. MCO P4400.150E
 3. TM 4700-15/1H
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3070. 5000 LEVEL COLLECTIVE EVENTS

ORDM-CSSO-5001: Coordinate distribution of ordnance assets

Evaluation Coded: Yes

Supported MET(s): 1

Sustainment Interval: 12 months

MOSSs Performing This Event: 2102, 2110, 2120, 2125, 2149, and 2181

Grade: MSgt-LtCol

Description: Coordinate, manage and disseminate all required ordnance assets to assigned units. This event applies to MPF/ATF/EEAP/NALMEB.

Condition: Given an Equipment Density List (EDL), access to Total Force Structure (TFS), list of units conducting operations, appropriate reference(s), equipment, and personnel.

Standard: Ensure all assigned units receive sufficient equipment to perform assigned missions IAW Oplans.

Event Components:

1. Identify embarkation assets.
2. Identify T/E deficiencies.
3. Identify unit assets.
4. Identify unit deficiencies.
5. Identify tool/special tool requirements.
6. Identify individual points of contact within the unit.
7. Identify support assets.
8. Review supportability estimate.
9. Identify mission requirements.
10. Identify MPF sourcing IAW OPLAN.
11. Identify organic requirements/tasks.
12. Submit organic requirements to MDSII/TPFDI.
13. Identify shortfalls.
14. Submit requisitions to cover shortfalls.
15. Reconcile backorder requisitions.
16. Distribute backorder receipts.
17. Validate Sac 3 Sustainment as provided from HHQ.
18. Re-evaluate supportability.

Prerequisite Events:

ORDM-CSSO-3007

Chained Events:

ORDM-ADMN-5023

ORDM-ADMN-5024

Related ITS:

2102-ADMN-2001

2110-ADMN-2016

2111-SCTY-1031-1034

2120-ADMN-2016

2125-ADMN-2016

2149-ADMN-2015

2181-ADMN-2015

References:

1. MCO 5530.13
2. MCWP 4-1
3. FMFM 4-3

ORDM-ADMN-5021: Draft/Review ordnance policies, directives, regulations, and logistics appendices

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2120, 2125, 2149, and 2181

Grade: MSgt-LtCol

Description: Draft/Review written policies, directives, regulations, and logistics appendices in support of unit maintenance operations to provide clarification, standard operating procedures and any amplifying instructions.

Condition: Given Marine Corps Orders and Directives, Unit Standing Operating Procedures, Naval Instructions, Department of Defense Publications, and equipment Technical Publications.

Standard: Provide supported elements with necessary instruction on maintenance support of ordnance weapons systems and equipment.

Event Components:

1. Review orders and directives.
2. Coordinate with supply.
3. Establish shop policy.
4. Assign personnel.
5. Coordinate with individual section and validate drafts.
6. Provide guidance to commanders in support of ordnance maintenance operations and physical security functions.

Related ITS:

2102-ADMN-2001-2009
2110-ADMN-2001-2020
2120-ADMN-2001-2017
2125-ADMN-2001-2020
2131-ADMN-1014
2131-ADMN-1015
2149-ADMN-2001-2018
2181-ADMN-2001-2022

References:

1. MCO P5215.1
2. MCO P5215.17
3. MCO P5600.31
4. SL 1-2
5. SL 1-3
6. UM-MCPDS

7. UM-PLMS
8. MCPCL CD
9. SECNAVINST 5210.11
10. SECNAVINST 5214.10
11. SECNAVINST 5216.5

ORDM-ADMN-5022: Coordinate assignment of ordnance personnel

Evaluation Coded: No

Supported MET(s): 3

Sustainment Interval: 6 months

MOSS Performing This Event: 2102, 2110, 2120, 2125, 2149, and 2181

Grade: MSgt-LtCol

Description: Review unit T/Os and/or operation orders; assign OccFld 21 personnel to specific billets/assignments in support of assigned operations. Coordinate with the occupational field sponsor and monitor to assist in filling personnel shortfalls.

Condition: Given a unit T/O, mission orders, and access to personnel monitors/sponsors.

Standard: To ensure key ordnance maintenance personnel are available to support unit missions.

Event Components:

1. View units mission statement.
2. View supported units T/O and T/E.
3. View supporting units mission statement.
4. Access TFS.
5. Track inbound and outbound personnel.
6. Maintain lists of key billets for specific operations.
7. Validate the T/O.
8. Review the mission statement.
9. Review op order.
10. Submit Table of Organization Change Requests, as required.

Chained Events:

ORDM-ADMN-3021

Support Requirements:

Other Units/Personnel

Related ITS:

2102-ADMN-2001

2102-ADMN-2003

References:

1. DLA Handbook
2. MCDP 4, Logistics
3. MCO 4733.1
4. MCO P4400.150
5. MCO P4790.1

6. MCO P4790.2
7. MCWP 4-11
8. TM 4700-15/1

ORDM-ADMN-5023: Conduct Command inspections/programs to enhance equipment/unit readiness

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 12 months

MOSS Performing This Event: 2102, 2110, 2120, 2125, 2149, and 2181

Grade: MSgt-LtCol

Description: Coordinate and conduct command inspections/programs.

Condition: Given orders, directives, policies, and logistic appendices.

Standard: Evaluate unit readiness, efficiencies and compliance with established Marine Corps policies and directives.

Event Components:

1. Review orders and directives governing maintenance programs.
2. Inspect for serviceability of ordnance weapons systems and equipment.
3. Inspect unit publications control program.
4. Inspect unit modification control program.
5. Inspect unit maintenance control programs.
6. Inspect unit support equipment and TMDE tool control program.

Related ITS:

2141-CWOP-1001-1005
2146-ADMN-2001-2005
2147-ORGM-1021-1025

References:

1. Marine Corps Logistics Chain Analysis Team (MCLCAT) Checklist

ORDM-ADMN-5024: Coordinate the acquisition of equipment shortfalls

Evaluation Coded: Yes

Supported MET(s): 3

Sustainment Interval: 3 months

MOSS Performing This Event: 2102, 2110, 2120, 2125, 2149, and 2181

Grade: MSgt-LtCol

Description: Validate the T/O&E and operation equipment density list (EDL) to determine equipment shortfalls for SAC 1, 2, 3 TAMCNs and reconcile with supply and HHQ to acquire deficiencies.

Condition: Given a T/O&E and EDL for a specific operation for supporting and

supported units.

Standard: Requisition equipment deficiencies needed to support the unit's mission.

Event Components:

1. Review higher HQ capabilities.
2. Review T/O and T/E.
3. Review unit CMR.
4. Review unit EDL.
5. Review op order.
6. Review mission statement from T/O.

Chained Events:

ORDM-ADMN-5023
ORDM-ADMN-5024
ORDM-ADMN-4022

Related ITS:

2102-ADMN-2001
2102-ADMN-2003
2102-ADMN-2007
2110-ADMN-2010

References:

1. DLA Handbook
 2. MCDP 4, Logistics
 3. MCO 4733.1
 4. MCO P4400.150
 5. MCO P4790.1
 6. MCO P4790.2
 7. MCWP 4-11
 8. TM 4700-15/1
-

CHAPTER 4

MOS 2102, ORDNANCE OFFICER INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	4000	4-1
EVENT CODING.....	4010	4-1
ADMINISTRATIVE NOTES.....	4020	4-1
INDEX OF INDIVIDUAL EVENTS.....	4030	4-2
2000 LEVEL INDIVIDUAL EVENTS.....	4040	4-3

MOS 2102, ORDNANCE OFFICER INDIVIDUAL TRAINING

4000. PURPOSE

This chapter contains individual training events for the Ordnance Officer.

4010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2102, indicating that the event is for MOS 2102, Ordnance Officers.

b. Field two - This field is alpha characters indicating a functional area. In this chapter, there is only one functional area, Administrative Functions, so the second field for each event will be "ADMN."

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains only 2000-level events.

4020. ADMINISTRATIVE NOTES

1. Various staff assignments will include but are not limited to Headquarters Marine Corps, Joint Task Forces (JTF), Marine Expeditionary Forces (MEF), and Marine Divisions. Due to the scope of duties and responsibilities at each level, the grade/rank structures will vary.

a. Divisions, JTF, Bases, Posts, and Stations - Majors.

b. MEF, JTF, MARFORRES, Posts, Bases, and Stations - Lieutenant Colonel.

2. Automated systems include CD-ROM, web based information and all applications of electronic media.

4030. INDEX OF INDIVIDUAL EVENTS

Event Code	Event	Page
	2000 LEVEL	
2102-ADMN-2001	Serve as the technical advisor for ground ordnance equipment	4-3
2102-ADMN-2002	Publish ground ordnance policies, directives and regulations	4-5
2102-ADMN-2003	Provide technical management for the repair of ground ordnance equipment	4-5
2102-ADMN-2004	Coordinate the fielding of ground ordnance equipment	4-6
2102-ADMN-2005	Develop Maintenance appendices for the logistics annex of operations orders	4-7
2102-ADMN-2006	Manage maintenance information requirements for ground ordnance equipment	4-7
2102-ADMN-2007	Coordinate maintenance for ground ordnance equipment in support of expeditionary maneuver warfare	4-8
2102-ADMN-2008	Monitor compliance with physical security programs	4-9
2102-ADMN-2009	Manage ammunition control programs	4-9
2102-ADMN-2010	Monitor ground ordnance equipment corrective maintenance programs	4-10
2102-ADMN-2011	Monitor ground ordnance equipment preventive maintenance checks and services (PMCS) programs	4-10
2102-ADMN-2012	Monitor ground ordnance equipment maintenance resources	4-11
2102-ADMN-2013	Monitor maintenance related programs for ground ordnance equipment	4-12
2102-ADMN-2014	Monitor ground ordnance equipment formal school training	4-12
2102-ADMN-2015	Prepare correspondence messages relating to ground ordnance equipment	4-13
2102-ADMN-2016	Review higher headquarters directives relating to ground ordnance equipment	4-13
2102-ADMN-2017	Establish major subordinate command level inspection program for ground ordnance equipment	4-14
2102-ADMN-2018	Perform occupational sponsor duties for ground ordnance equipment	4-15

4040. 2000 LEVEL INDIVIDUAL EVENTS

2102-ADMN-2001: Provide technical advice concerning ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given an automated system with internet access, Table of Organization & Equipment (T/O&E), equipment, personnel, direction from the Commanding General or staff and references.

Standard: To ensure procedures for proper maintenance and distribution of ground ordnance equipment are employed and adhered to.

Performance Steps:

1. Prepare information on all matters relating to ground ordnance issues.
2. Provide guidance on all matters relating to ground ordnance issues.
3. Provide recommendations on all matters relating to ground ordnance issues.
4. Compose staffing papers on ground ordnance related issues.
5. Conduct ground ordnance related briefings.
6. Serve as ground ordnance specialist on various staffs.

References:

1. Applicable Technical Information
2. Applicable Unit Logistics Support Summary (ULSS)
3. Joint Operations Planning, Volumes I-IV
4. Local policies and procedures
5. Marine Corps Manual
6. MCBUL 3000
7. MCO 4400.82
8. MCO 4420.15
9. MCO 4733.1
10. MCO 5311.1
11. MCO 8010.1
12. MCO 8011.1
13. MCO 8020.1
14. MCO 8025.1
15. MCO 8300.1
16. MCO P4790.1
17. MCO P4790.2
18. OPNAVINST 5530.13
19. SECNAVINST 5216.5
20. Table of Organization & Equipment (T/O&E)
21. TM 4700-15/1
22. UM 4790-5
23. 29 CFR 1910.12000
24. Applicable Modification Instructions (MI's)
25. Current ALMARs
26. Current MARADMINs
27. DOD 4160.21-M-1
28. FMFRP 4-34

29. MCDP-4
30. MCO 1510 Series
31. MCO 1553.2
32. MCO 1553.3
33. MCO 1650.17
34. MCO 3000.11
35. MCO 4030.16
36. MCO 4030.19
37. MCO 4030.25
38. MCO 4030.33
39. MCO 4030.36
40. MCO 4105 Series
41. MCO 4105.2
42. MCO 4110.2
43. MCO 4340.1
44. MCO 4400.16
45. MCO 4420.15
46. MCO 4450.12
47. MCO 4600.25
48. MCO 4600.30
49. MCO 4610.15
50. MCO 4710.8
51. MCO 4790.18
52. MCO 4855.10
53. MCO 5100.29
54. MCO 5100.8
55. MCO 5104.3
56. MCO 5215.1
57. MCO 5215.17
58. MCO 5500.6
59. MCO 5530.14
60. MCO 5600.31
61. MCO 8400.6
62. MCO P1070.12
63. MCO P11240.106
64. MCO P11262.2
65. MCO P1200.7
66. MCO P4400.105
67. MCO P4400.150
68. MCO P4600.14
69. MCO P4600.19
70. MCO P4610.19
71. MCO P4790.3
72. MCO P5090.2
73. MCRP 3-OA
74. MCRP 3-OB
75. MCWP 3-1
76. MCWP 4-1
77. MCWP 4-11
78. MSE/Unit Embarkation
79. NAVFAC P307
80. NAVMC 2706
81. NAVSEATM 50420-AA-RAD-010
82. OPNAVINST 5530.13
83. SL 1-2/3
84. Special Allowance List
85. TB MED 524

- 86. TI 4731-14/1
- 87. TI 4733-15/1
- 88. TI 4733-15/11
- 89. TI 8005-25/12
- 90. TM 4420-15/1
- 91. TM 4795-12
- 92. TM 4795-34
- 93. UM 4400-124
- 94. UM-MCPDS
- 95. UM-PLMS

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2002: Write ground ordnance policies, directives, and regulations

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, personnel, and references.

Standard: To ensure all ordnance procedures, directives, and regulation from adjacent/higher commands are adhered to per the references.

Performance Steps:

- 1. Validate requirements.
- 2. Determine requirements.
- 3. Develop policy as it relates to ground ordnance issues.
- 4. Develop directives as it relates to ground ordnance issues.
- 5. Staff documents through appropriate higher/adjacent agencies.
- 6. Analyze the effectiveness of policies.

References:

- 1. Applicable TMs
- 2. SECNAVINST 5216.5
- 3. SECNAVINST 5311

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2003: Provide technical management for the repair of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given applicable references, automated systems with internet access and equipment technical information.

Standard: To ensure maintenance of ground ordnance equipment is accomplished per mission requirements and the references.

Performance Steps:

1. Forecast requirements based off empirical data.
2. Validate requirements.
3. Validate deficiencies.
4. Direct maintenance solutions.
5. Monitor maintenance effort.
6. Provide technical guidance, as required.
7. Analyze effectiveness of administrative functions.
8. Focus ground ordnance equipment maintenance effort to maximum combat effectiveness.
9. Sustain ground ordnance equipment maintenance effort to maximum combat effectiveness.
10. Monitor configuration management.

References:

1. Applicable Technical Information
2. Applicable Unit Logistics Support Summary (ULSS)
3. MCBUL 3000
4. TM 4700-15/1
5. UM 4790-5
6. Applicable Modification Instructions
7. MCO P4400.150

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2004: Coordinate the fielding of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: To ensure equipment fielding is supported and accomplished per mission requirements and the references.

Performance Steps:

1. Validate equipment-fielding requirements.
2. Review fielding documents.
3. Direct the fielding effort.
4. Direct placement of equipment into service.
5. Coordinate staff functions to determine priority of fielding.
6. Monitor completion of administrative functions.
7. Review technical information.

References:

1. Applicable Technical Information
2. Applicable Unit Logistics Support Summary (ULSS)
3. Local Policies and Procedures
4. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2005: Develop maintenance appendices for the logistics annex of operations orders

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05, Capt, Maj, LtCol

Condition: Given an operation plan, Table of Organization & Equipment (T/O&E), automated systems with internet access, and other technical information.

Standard: To support all mission requirements of Marine Air Ground Task Force (MAGTF) operation per the references.

Performance Steps:

1. Determine operational requirements.
2. Validate assigned maintenance capabilities.
3. Validate support personnel requirements based on the operation plan.
4. Validate support equipment requirements based on operation plan.
5. Coordinate maintenance administration requirements.
6. Prepare maintenance support appendices for ground ordnance equipment.
7. Validate environmental compliance requirements.

References:

1. SECNAVINST 5216.5
2. MCWP 4-11

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2006: Manage maintenance information requirements for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ground ordnance equipment information is completed per mission requirements and the references.

Performance Steps:

1. Validate maintenance information requirements.
2. Validate required output reports.
3. Monitor completion of maintenance resource reports.
4. Analyze performance indicators of reports.
5. Conduct trend analysis of reports.
6. Direct corrective action.
7. Review message traffic for information concerning ground ordnance equipment.
8. Coordinate communications with adjacent/higher supporting agencies.

References:

1. Applicable Technical Information
2. MCBUL 3000
3. MCO P4790.1
4. MCO P4790.2
5. TM 4700-15/1
6. UM 4790-5
7. MCO P4400.150

Administrative Instructions: See Administrative Note #1, para 4020.

2102-ADMN-2007: Coordinate maintenance for ground ordnance equipment in support of expeditionary maneuver warfare

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LtCol

Condition: Given an operation plan, Table of Organization & Equipment (T/O&E), automated systems with internet access, and other technical information.

Standard: Support Expeditionary Maneuver Warfare mission requirements per the references.

Performance Steps:

1. Validate requirements in support of operational commanders.
2. Coordinate the validation of the operational commander's required maintenance.
3. Analyze readiness posture of deployed Marine Air Ground Task Forces (MAGTFs).
4. Coordinate the focus of ground ordnance equipment with higher/adjacent agencies in support of the maintenance effort.

References:

1. MCWP 3-1
2. MCWP 4-1
3. MCWP 4-11

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2008: Monitor compliance with physical security programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, equipment records, and ground ordnance equipment storage facilities.

Standard: Ensure ground ordnance equipment is safeguarded from theft/tampering per mission requirements and references.

Performance Steps:

1. Validate security requirements.
2. Analyze the established security procedures for adequacy.
3. Monitor compliance with security requirements for facilities.
4. When assigned as commander, ensure Ordnance personnel are security trained.
5. When assigned as commander, ensure Arms Ammunition and Explosives (AA&E) personnel are screened.
6. Analyze effectiveness of security programs.

References:

1. Local Policies and Procedures
2. OPNAVINST 5530.13
3. MCO 5500.6
4. MCO 5530.14

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2009: Manage ammunition control programs

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), ammunition records, and personnel.

Standard: Ensure mission requirements are maintained per the references.

Performance Steps:

1. Validate ammunition requirements.
2. Register ammunition requirements.
3. Monitor safety of personnel.
4. Monitor ammunition-handling procedures.
5. Ensure ammunition accountability is adhered to.
6. Ensure completion of administrative functions.

References:

1. Local Policies and Procedures
2. MCO 8010.1
3. MCO 8011.1
4. MCO 8020.1
5. MCO 8025.1
6. MCO 8300.1
7. MCO 4340.1

Administrative Instructions: This task applies to Ordnance Officers at the division and higher levels, to include aviation ordnance (Class V(A)) at Marine Expeditionary Force.

2102-ADMN-2010: Monitor ground ordnance equipment corrective maintenance programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure corrective maintenance is accomplished per the mission requirements and references.

Performance Steps:

1. Monitor corrective maintenance requirements.
2. Monitor applicable maintenance procedures.
3. Monitor applicable reporting procedures.
4. Monitor quality control effectiveness.
5. Coordinate with adjacent/higher maintenance activities.
6. Coordinate staff actions relating to maintenance of ground ordnance equipment.

References:

1. Applicable Technical Information
2. Local Policies and Procedures
3. MCBUL 3000
4. MCO 4400.82
5. TM 4700-15/1
6. MCO 3000.11
7. UM 4790-5

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2011: Monitor ground ordnance equipment preventive maintenance checks and services (PMCS) programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure preventive maintenance checks and services are accomplished per mission requirements and references.

Performance Steps:

1. Monitor Preventive Maintenance Checks and Services (PMCS) requirements.
2. Monitor cyclic maintenance requirements.
3. Monitor special maintenance requirements.
4. Monitor deferred maintenance requirements.
5. Monitor quality control (QC) procedures for PMCS program.

References:

1. Applicable Technical Information
2. Local Policies and Procedures
3. MCBUL 3000
4. MCO 4400.82
5. TM 4700-15/1
6. MCO 3000.11
7. UM 4790-5

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2012: Monitor ground ordnance equipment maintenance resources

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given the references, Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, personnel, maintenance facility, and a budget.

Standard: Ensure that maintenance resources are focused on ordnance equipment readiness and are maintained in accordance with the references and commanders intent.

Performance Steps:

1. Validate required resources.
2. Prioritize available resources.
3. Plan employment of available resources.
4. Coordinate available resources with adjacent/higher agencies.
5. Provide recommendations to G-1, MMEA, and Occupational Field Sponsor on the assignment of all Occupational Field 21 personnel.

References:

1. Applicable Technical Information
2. MCBUL 3000
3. MCO P4790.2
4. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2013: Monitor maintenance related programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure that maintenance related programs are employed per mission requirements and references.

Performance Steps:

1. Validate mission requirements.
2. Monitor Product Quality Deficiency Report (PQDR) program.
3. Monitor Corrosion Prevention and Control (CPAC) program.
4. Monitor a quality control (QC) program.
5. Monitor Depot Level Maintenance programs.
6. Monitor execution of Contract Logistic Support (CLS).
7. Monitor execution of warranty programs.
8. Monitor demilitarization procedures.
9. Validate Military Awards/Incentives programs submissions.
10. Assess life cycle management as subject matter expert (SME).

References:

1. Applicable Technical Information
2. Applicable Unit Logistics Support Summary (ULSS)
3. MCO P4790.1
4. MCO P4790.2

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2014: Monitor ground ordnance equipment formal school training

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, personnel, personnel requirements, and mission requirements.

Standard: Ensure that personnel are trained per the references.

Performance Steps:

1. Validate requirements.
2. Coordinate formal Military Occupational Specialty (MOS) training with

- higher/adjacent agencies.
3. Coordinate executive level staff actions.
 4. Analyze effectiveness of formal MOS training.

References:

1. Applicable Technical Information
2. MCO P4790.1
3. MCO P4790.2
4. Table of Organization & Equipment (T/O&E)
5. MCO 1510 Series
6. MCO 1553.2
7. MCO 1553.3

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2015: Prepare correspondence messages relating to ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, and the information required to publish.

Standard: Ensure correspondence is completed per the mission requirements and references.

Performance Steps:

1. Prepare correspondence, as required.
2. Prepare messages, as required.
3. Prepare reports, as required.
4. Prepare policy letters, as required.
5. Review all correspondence submitted by subordinates.
6. Direct correspondence filing procedures.
7. Staff correspondence to higher/adjacent agencies.

References:

1. Local Policies and Procedures
2. SECNAVINST 5216.5

Administrative Instructions: See Administrative Note #1, para 4020.

2102-ADMN-2016: Review higher headquarters directives relating to ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, and the information required to publish.

Standard: Ensure policies and procedures contained in higher headquarters directives support mission requirements.

Performance Steps:

1. Determine applicability.
2. Recommend changes, as required.
3. Analyze impact.
4. Analyze effectiveness of review.

References:

1. MCO P4790.2
2. Table of Organization & Equipment (T/O&E)
3. MCWP 4-1
4. MCWP 4-11

Administrative Instructions: See Administrative Note #1, para 4020.

2102-ADMN-2017: Establish major subordinate command-level inspection program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05, Capt, Maj, LtCol

Condition: Given the references, automated systems with internet access, and the information required to publish.

Standard: To ensure that ground ordnance equipment related planning and organization are sound policies, complies with, and that readiness and capability are sustained to support mission requirements.

Performance Steps:

1. Validate effectiveness of maintenance related programs.
2. Validate compliance with directives.
3. Validate equipment readiness.
4. Analyze trend indicators.
5. Direct corrective action.
6. Analyze effectiveness of corrective action.

References:

1. Applicable Technical Information
2. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 4020.

2102-ADMN-2018: Perform Occupational Sponsor duties for ground ordnance equipment community

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Maj, LtCol

Condition: Given Table of Organizations & Equipment (T/O&E), automated systems with internet access, and references.

Standard: To ensure management of the Occupational Field 21 in support of Marine Corps mission.

Performance Steps:

1. Exercise oversight of occupational field specialties as the Subject Matter Expert (SME).
2. Participate in the combat development systems process.
3. Assist in managing grade structure for officers.
4. Assist in managing grade structure for enlisted Marines.
5. Coordinate with Total Force Structure Division in the conduct of structure reviews of all TO/E's.
6. Validate existing structure requirements.
7. Determine requisite manning levels necessary to adequately support MOS structure.
8. Interface with MCCDC, Training and Education Command, and formal schools.
9. Review training tracks and analyze career progression training to meet Marine Corps requirements.
10. Review Individual Training Standards.
11. Validate Training Input Plan.
12. Review Course Content Review Board initiatives.
13. Establish point of contact for occupational field 21 for Deputy Commandant for Manpower and Reserve Affairs.
14. Provide occupational field input to officer and enlisted plans section for grade shaping and accessions.
15. Screen LAT movers and additional MOS requests.
16. Coordinate with officer and enlisted assignments in regards to prerequisites, pending structure change, unique assignments requirements, and MOS briefs.

References:

1. Applicable Technical Information
 2. Applicable Unit Logistics Support Summary (ULSS)
 3. Marine Corps Manual
 4. MCBUL 3000
 5. OPNAVINST 5530.13
 6. Table of Organization & Equipment (T/O&E)
 7. Current ALMARS
 8. Current MARADMINs
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CHAPTER 5

MOS 2110, ORDNANCE VEHICLE MAINTENANCE OFFICER INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	5000	5-1
EVENT CODING.....	5010	5-1
ADMINISTRATIVE NOTES.....	5020	5-1
INDEX OF INDIVIDUAL EVENTS.....	5030	5-2
2000 LEVEL INDIVIDUAL EVENTS.....	5040	5-4

MOS 2110, ORDNANCE VEHICLE MAINTENANCE OFFICER INDIVIDUAL TRAINING

5000. PURPOSE

This chapter contains individual training events for the Ordnance Vehicle Maintenance Officer.

5010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2110, indicating that the event is for MOS 2110, Ordnance Vehicle Maintenance Officers.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Administrative Functions	ADMN	2110-ADMN-xxxx
Technical Functions	TECH	2110-TECH-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains only 2000-level events.

5020. ADMINISTRATIVE NOTES

1. Various staff assignments will include but are not limited to Headquarters Marine Corps (HQMC), Post, Bases, Stations, Divisions, Regiments, Battalions, and Companies. Due to the scope of duties and responsibilities at each level, the grade/rank structure will vary.

a. Posts, Bases, Stations, Regiments, and Battalions - CW03.

b. Posts, Bases, Stations, and HQMC - CW05.

2. Automated systems include CD-ROM, web based information and all applications of electronic media.

5030. INDEX OF 2000-LEVEL INDIVIDUAL EVENTS

Event Code	Event	Page
	ADMINISTRATIVE FUNCTIONS	
2110-ADMN-2001	Manage the unit ground ordnance maintenance operations	5-4
2110-ADMN-2002	Employ ground ordnance equipment maintenance management programs	5-5
2110-ADMN-2003	Manage ground ordnance equipment maintenance resources	5-6
2110-ADMN-2004	Manage technical information and directives for ground ordnance equipment	5-7
2110-ADMN-2005	Monitor maintenance shop-level MOS training program	5-7
2110-ADMN-2006	Manage support equipment programs for ground ordnance equipment	5-8
2110-ADMN-2007	Manage supply support procedures for ground ordnance equipment	5-9
2110-ADMN-2008	Manage ground ordnance maintenance facilities	5-10
2110-ADMN-2009	Manage maintenance production schedule for ground ordnance equipment	5-10
2110-ADMN-2010	Manage maintenance-related programs for ground ordnance equipment	5-11
2110-ADMN-2011	Manage preventive maintenance checks and services (PMCS) programs for ground ordnance equipment	5-12
2110-ADMN-2012	Manage corrective maintenance program for ground ordnance equipment	5-12
2110-ADMN-2013	Manage modification programs for ground ordnance equipment	5-13
2110-ADMN-2014	Monitor environmental compliance for ground ordnance equipment	5-14
2110-ADMN-2015	Manage shop safety program	5-14
2110-ADMN-2016	Manage embarkation program for ground ordnance equipment	5-15
2110-ADMN-2017	Manage maintenance shop information requirements	5-16
2110-ADMN-2018	Prepare routine correspondence, messages, staff papers, and policy letters for ground ordnance equipment	5-17
2110-ADMN-2019	Manage physical security programs for ground ordnance equipment	5-17
2110-ADMN-2020	Assist in the fielding of ground ordnance equipment	5-18
	TECHNICAL FUNCTIONS	
2110-TECH-2031	Serve as the technical advisor for the family of ground ordnance vehicles	5-19
2110-TECH-2032	Provide technical management for the repair of the family of ground ordnance vehicles	5-21
2110-TECH-2033	Perform duties as load test certification officer	5-21
2110-TECH-2034	Direct recovery operations for ground ordnance vehicles	5-22

2110-TECH-2035	Manage licensing program for ground ordnance vehicles	5-22
2110-TECH-2036	Manage the joint oil analysis program	5-23
2110-TECH-2037	Manage unit ammunition control program	5-24

5040. 2000 LEVEL INDIVIDUAL TRAINING

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2110-ADMN-2001: Manage the unit ground ordnance maintenance operations

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), equipment records, automated systems with internet access, and references.

Standard: Ensure that ground ordnance equipment remains combat ready per the references.

Performance Steps:

1. Determine mission requirements.
2. Prioritize ground ordnance equipment maintenance effort to maximize combat effectiveness.

References:

1. 29 CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARS
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP-4
11. MCO 1510 SERIES
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82
27. MCO 4420.15
28. MCO 4450.12
29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15
32. MCO 4710.8

- 33. MCO 4733.1
- 34. MCO 4790.18
- 35. MCO 4790.2
- 36. MCO 4855.10
- 37. MCO 5100.29
- 38. MCO 5100.8
- 39. MCO 5104.3
- 40. MCO 5215.1
- 41. MCO 5215.17
- 42. MCO 5500.6
- 43. MCO 5530.14
- 44. MCO 8300.1
- 45. MCO 8400.6
- 46. MCO P11240.106
- 47. MCO P11262.2
- 48. MCO P1200.7
- 49. MCO P4400.105
- 50. MCO P4400.150
- 51. MCO P4600.14
- 52. MCO P4600.19
- 53. MCO P4610.19
- 54. MCO P4790.1
- 55. MCO P4790.2
- 56. MCO P4790.3
- 57. MCO P5090.2
- 58. MCO P5600.31
- 59. MCRP 3-OA
- 60. MCRP 3-OB
- 61. MCWP 3-1
- 62. MCWP 4-1
- 63. MSE/Unit Embarkation
- 64. NAVFAC P307
- 65. NAVSEATM 50420-AA-RAD-010
- 66. OPNAVINST 5530.13
- 67. OPNAVINST 5530.14
- 68. SECNAVINST 5216.5
- 69. SL 1-2/Sl 1-3
- 70. Table of Organization & Equipment (T/O&E)
- 71. TB MED 524
- 72. TI 4733-15/1
- 73. TI 4733-15/11
- 74. TM 4700-15/1
- 75. TM 4795-12
- 76. TM 4795-34
- 77. UM 4400-124
- 78. UM 4790-5
- 79. UM-MCPDS
- 80. UM-PLMS

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2002: Employ ground ordnance equipment maintenance management programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, and applicable references.

Standard: Ensure all applicable maintenance management programs are established per the references.

Performance Steps:

1. Validate mission requirements.
2. Analyze capabilities.
3. Validate resource requirements.
4. Analyze external requirements.
5. Project future maintenance requirements.
6. Develop procedures utilizing functional areas of maintenance management.
7. Implement maintenance management programs.
8. Manage maintenance management programs.

References:

1. MCO P4790.2
2. MCO P1200.7
3. MCO 3000.11
4. TM 4700-15/1
5. Applicable Technical Information
6. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2003: Manage ground ordnance equipment maintenance resources

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, personnel, maintenance facility, and a budget.

Standard: Ensure maintenance resources are focused on ordnance equipment readiness and are maintained in accordance with the references and commanders intent.

Performance Steps:

1. Determine required resources.
2. Prioritize available resources.
3. Plan employment of available resources.
4. Organize available resources.
5. Coordinate available resources.

References:

1. MCO P4790.2

2. Table of Organization & Equipment (T/O&E)
3. TM 4700-15/1
4. MCO 4400.150
5. MCWP 4-1
6. MCDP-4
7. MCO 4733.1
8. MCO 4710.8
9. MCO 5215.1
10. MCO 5215.17
11. MCO P5600.31
12. MCO P4400.82
13. MCO 3000.11
14. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2004: Manage technical information and directives for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, mission requirements, and references.

Standard: Ensure the quantity, serviceability, and accountability of all information sources are maintained per the references.

Performance Steps:

1. Validate requirements.
2. Register requirements.
3. Manage publications control program.

References:

1. MCO P4790.2
2. MCO P5215.1
3. MCO 5600.31
4. Table of Organization & Equipment (T/O&E)
5. UM-PLMS
6. SL 1-2/Sl 1-3
7. UM-MCPDS

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2005: Monitor maintenance shop-level MOS training

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, personnel records, and mission requirements.

Standard: Ensure Ordnance maintenance personnel are trained per the references.

Performance Steps:

1. Validate requirements.
2. Coordinate MOS training.
3. Direct MOS training.
4. Analyze MOS training effectiveness.

References:

1. MCO 1510 Series
2. MCO P4790.2
3. MCO 1553.3
4. MCO 1553.2
5. MCRP 3-OA
6. MCRP 3-OB
7. MCWP 4-1
8. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2006: Manage support equipment programs for ground ordnance

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, and references.

Standard: Ensure support equipment is utilized and maintenance programs are implemented.

Performance Steps:

1. Validate requirements.
2. Ensure control procedures are established.
3. Ensure Preventive Maintenance Checks and Services (PMCS) is conducted.
4. Ensure corrective maintenance is conducted.
5. Analyze effectiveness of support program.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. MCO 4733.1
4. MCO P4790.2
5. TI 4733-15/1
6. TI 4733-15/11

7. Current MARADMINs
8. Applicable Technical Information
9. Table of Organization & Equipment (T/O&E)
10. Local Policies and Procedures

Administrative Instructions: The term support equipment includes but is not limited to tool sets, kits, chests, hoists, jacks, stands, and TMDE (calibration equipment). See Administrative Notes, para 5020.

2110-ADMN-2007: Manage supply support procedures for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, unit budget, mission requirements, and references.

Standard: Ensure proper supply procedures are adhered to per the mission requirements and references.

Performance Steps:

1. Validate supply support requirements.
2. Coordinate requisition procedures.
3. Direct the accountability of all repair parts.
4. Direct validation procedures.
5. Direct reconciliation procedures.
6. Coordinate with internal supply support agencies.
7. Coordinate with external supply support agencies.
8. Validate budget requirements.

References:

1. MCO P4400.82
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 8300.1
5. MCO 4340.1
6. MCO P4400.150
7. MCO 4400.16
8. UM 4400-124
9. Local Policies and Procedures
10. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2008: Manage ground ordnance maintenance facilities

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, maintenance facilities, mission requirements and references.

Standard: Ensure maintenance facilities are established per the mission requirements and references.

Performance Steps:

1. Validate requirements.
2. Validate maintenance flow plan.
3. Validate facilities to support mission.
4. Validate operational risk management procedures.
5. Prioritize use of facilities.
6. Ensure facilities are maintained.

References:

1. MCO P4790.1
2. MCO P4790.2
3. Applicable Technical Information
4. MCO P11262.2
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2009: Manage maintenance production schedule for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, Table of Organization & Equipment (T/O&E), automated systems with internet access, automated reports, equipment records, and maintenance resources.

Standard: Ensure maintenance production flow is accomplished per the mission requirements, resources, and references.

Performance Steps:

1. Validate production capability.
2. Prioritize maintenance effort.
3. Validate available resources.
4. Analyze quality control effectiveness.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCBUL 3000
5. Table of Organization & Equipment (T/O&E)
6. Applicable Technical Information
7. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2010: Manage maintenance-related programs for ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure maintenance related programs are employed per the mission requirements and references.

Performance Steps:

1. Validate mission requirements.
2. Manage Product Quality Deficiency Report (PQDR) program.
3. Manage Corrosion Prevention and Control (CPAC) program.
4. Manage a Quality Control (QC) program.
5. Manage unit level execution of Depot Level Maintenance programs.
6. Manage execution of Contract Logistic Support (CLS).
7. Manage execution of warranty programs.
8. Manage demilitarization procedures.
9. Manage Military Awards/Incentives Program.

References:

1. MCO P4790.2
2. MCO 4733.1
3. MCO 4855.10
4. MCO P4790.1
5. MCO 4105.2
6. MCO 1650.17
7. MCO P4790.3
8. MCO 3000.11
9. MCO 4790.18
10. MCBUL 3000
11. TM 4795-12
12. TM 4795-34
13. TM 4750-15/1
14. DOD 4160.21-M-1
15. Applicable Unit Logistics Support Summary (ULSS)
16. Applicable Technical Information
17. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2011: Manage preventive maintenance checks and services (PMCS) programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure preventive maintenance checks and services are accomplished per the mission requirements and references.

Performance Steps:

1. Validate PMCS requirements.
2. Validate cyclic maintenance requirements.
3. Validate special maintenance requirements.
4. Validate deferred maintenance requirements.
5. Validate PMCS schedule.
6. Manage documentation of PMCS program.
7. Manage Quality Control (QC) procedures for PMCS program.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCBUL 3000
5. MCO 4400.16
6. TM 4700-15/1
7. Applicable Technical Information
8. Local policies and procedures
9. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2012: Manage corrective maintenance program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure corrective maintenance is accomplished per the mission

requirements and references.

Performance Steps:

1. Validate corrective maintenance requirements.
2. Monitor applicable maintenance procedures.
3. Monitor applicable reporting procedures.
4. Analyze quality control effectiveness.
5. Coordinate with external maintenance activities.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCO 4400.16
5. MCO 4400.82
6. MCO 4400.150
7. MCBUL 3000
8. TM 4700-15/1
9. Local Policies and Procedures
10. Applicable Technical Information
11. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2013: Manage modification programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment modifications are accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment-requiring modification.
2. Monitor modification program.
3. Verify completion of administrative requirements.
4. Analyze modification program effectiveness.

References:

1. MCO P4790.2
2. MCO P4790.1
3. Table of Organization & Equipment (T/O&E)
4. TM 4700-15/1
5. Applicable MI's

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2014: Monitor environmental compliance for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure environmental compliance procedures are observed per the mission requirements and references.

Performance Steps:

1. Validate environmental compliance requirements.
2. Coordinate with unit environmental compliance representative.
3. Direct corrective actions.
4. Analyze effectiveness of program.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P5090.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. TB MED 524
9. NAVSEATM 50420-AA-RAD-010
10. Current ALMARs
11. Current MARADMINs
12. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of environment compliance encompasses but is not limited to the following areas of concern: radiation safety, Hazardous Material (HAZMAT) handling procedures, Depleted Uranium (DU) hazards, Nuclear Regulatory Commission (NRC) Licenses, Material Safety Data Sheets (MSDS). See Administrative Notes, para 5020.

2110-ADMN-2015: Manage shop safety program

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure shop safety practices are observed per the mission requirements and references.

Performance Steps:

1. Validate safety program requirements.
2. Supervise compliance with shop safety procedures.
3. Direct corrective actions.
4. Analyze effectiveness of program.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P5090.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. MCO 4450.12
9. TB MED 524
10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current ALMARs
13. Current MARADMINs
14. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of safety encompasses all aspects of ground safety, which includes but is not limited to the following areas of concern: radiation safety, laser safety, Occupational Safety & Health administration (OSHA) regulations & policies, Material Safety Data Sheets (MSDS), battery rooms, Personal Protective Equipment (PPE), heat conditions, fire protection, medical surveillance programs, and industrial hygiene. See Administrative Notes, para 5020.

2110-ADMN-2016: Manage embarkation program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment is embarked per the mission requirements and references.

Performance Steps:

1. Validate embarkation requirements.
2. Ensure that requirements are documented.
3. Coordinate with embarkation personnel.
4. Manage the preparation of equipment for embark.

References:

1. MSE/Unit embarkation
2. Table of Organization & Equipment (T/O&E)
3. MCO 4030.16
4. MCO 4030.19

5. MCO 4030.25
6. MCO 4030.33
7. MCO 4030.36
8. MCO 4110.2
9. MCO 4400.16
10. MCO P4400.150
11. MCO P4600.14
12. MCO P4600.19
13. MCO 4600.25
14. MCO 4600.30
15. MCO 4610.15
16. MCO P4610.19

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2017: Manage maintenance shop information requirements

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment information is completed per the mission requirements and references.

Performance Steps:

1. Validate maintenance information requirements.
2. Validate required output reports.
3. Manage completion of maintenance resource reports.
4. Analyze performance indicators of reports.
5. Conduct trend analysis of reports.
6. Direct corrective action.
7. Review message traffic for information concerning ground ordnance equipment.

References:

1. MCO P4790.2
2. Current ALMARs
3. Current MARADMINs
4. Applicable Technical Information
5. Local Policies and Procedures
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/Automated Information Systems, MIMMS (AIS), Asset Tracking Logistics, Supply System II+ (ATLASS II+), and Defense Message System (DMS). See Administrative Notes, para 5020.

2110-ADMN-2018: Prepare routine correspondence, messages, staff papers, and policy letters for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and the information required to be published.

Standard: Ensure routine correspondence, messages, staff papers, and policy letters are completed per the mission requirements and references.

Performance Steps:

1. Prepare correspondence, as required.
2. Prepare messages, as required.
3. Prepare reports, as required.
4. Prepare staff papers, as required.
5. Prepare policy letters, as required.
6. Review all correspondence submitted by subordinates.
7. Direct correspondence filing procedures.
8. Staff correspondence to higher and adjacent agencies.

References:

1. MCO P1070.12
2. SECNAVINST 5216.5
3. MCWP 3-1
4. Local policies and procedures
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2019: Manage physical security programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, equipment records, and ground ordnance equipment storage facilities.

Standard: Ensure ground ordnance equipment is safeguarded from theft/tampering per the mission requirements and references.

Performance Steps:

1. Validate security requirements.
2. Analyze the established security procedures for adequacy.
3. Validate compliance of security requirements for facilities.

4. Ensure personnel are security trained.
5. Conduct AA&E personnel screenings.
6. Analyze effectiveness of security programs.

References:

1. MCO 5530.14
2. OPNAVINST 5530.13
3. OPNAVINST 5530.14
4. MCO 5500.6
5. MCO P4400.150
6. MCO 8300.1
7. Current ALMARs
8. Current MARADMINs
9. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-ADMN-2020: Assist in the fielding of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment fielding is supported and accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment-fielding requirements.
2. Review fielding documents.
3. Assist in fielding plan.
4. Coordinate placement of equipment into service.
5. Coordinate staff functions to determine priority of fielding.
6. Monitor completion of administrative functions.

References:

1. MCO P4790.2
2. Applicable Technical Information
3. Applicable Unit Logistics Support Summary (ULSS)
4. MCO 4420.15
5. MCO 8300.1
6. MCO P4400.82
7. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

FUNCTIONAL AREA: TECHNICAL FUNCTIONS

2110-TECH-2031: Serve as the technical adviser for the family of ground ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Provided with guidance and command philosophy from the Commanding Officer and his staff in accordance with the references.

Standard: Ensure unit readiness is sustained at an acceptable level and provide recommendations to the Commanding Officer regarding operations and maintenance of ground ordnance equipment.

Performance Steps:

1. Prepare information on all matters relating to ordnance vehicles.
2. Provide guidance on all matters relating to ordnance vehicles.
3. Provide recommendations on all matters relating to ordnance vehicles.
4. Conduct internal reviews.

References:

1. 29 CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARS
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP-4
11. MCO 1510 Series
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82
27. MCO 4420.15
28. MCO 4450.12
29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15

32. MCO 4710.8
33. MCO 4733.1
34. MCO 4790.18
35. MCO 4790.2
36. MCO 4855.10
37. MCO 5100.29
38. MCO 5100.8
39. MCO 5104.3
40. MCO 5215.1
41. MCO 5215.17
42. MCO 5500.6
43. MCO 5530.14
44. MCO 8300.1
45. MCO 8400.6
46. MCO P11240.106
47. MCO P11262.2
48. MCO P1200.7
49. MCO P4400.105
50. MCO P4400.150
51. MCO P4600.14
52. MCO P4600.19
53. MCO P4610.19
54. MCO P4790.1
55. MCO P4790.2
56. MCO P4790.3
57. MCO P5090.2
58. MCO P5600.31
59. MCRP 3-OA
60. MCRP 3-OB
61. MCWP 3-1
62. MCWP 4-1
63. MSE/Unit embarkation
64. NAVFAC P307
65. NAVSEATM 50420-AA-RAD-010
66. OPNAVINST 5530.13
67. OPNAVINST 5530.14
68. SECNAVINST 5216.5
69. SL 1-2/Sl 1-3
70. Table of Organization & Equipment (T/O&E)
71. TB MED 524
72. TI 4733-15/1
73. TI 4733-15/11
74. TM 4700-15/1
75. TM 4795-12
76. TM 4795-34
77. UM 4400-124
78. UM 4790-5
79. UM-MCPDS
80. UM-PLMS

Administrative Instructions: See Administrative Notes, para 5020.

2110-TECH-2032: Provide technical management for the repair of the family of ground ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), personnel, personnel records, equipment, equipment records, and maintenance facilities.

Standard: Ensure maintenance of ordnance vehicles is accomplished per the mission requirements and references.

Performance Steps:

1. Identify requirements.
2. Validate requirements.
3. Validate deficiencies.
4. Direct maintenance solutions.
5. Manage maintenance effort.
6. Manage maintenance personnel.
7. Ensure safety of personnel.
8. Analyze effectiveness of administrative functions.
9. Focus ground ordnance equipment maintenance efforts to maximize combat effectiveness.

References:

1. MCO 4790.2
2. MCWP 4-11
3. MCWP 4-24

Administrative Instructions: See Administrative Notes, para 5020.

2110-TECH-2033: Perform duties as load test certification officer

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, and equipment records.

Standard: Ensure load testing is conducted, certified, and maintained per the mission requirements and references.

Performance Steps:

1. Validate load test condition inspection requirements.
2. Establish a load test certification schedule.
3. Certify annual condition inspections.
4. Assign test director.
5. Assign test inspectors.

6. Coordinate load testing with supporting agencies.
7. Analyze effectiveness of administrative functions.

References:

1. MCO P11240.106
2. MCO P11262.2
3. NAVFAC P307
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-TECH-2034: Direct recovery operations for ground ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and equipment.

Standard: Ensure recovery of vehicle is safely accomplished per the mission requirements and references.

Performance Steps:

1. Supervise recovery training.
2. Validate recovery requirements.
3. Validate Battle Damage Assessment and Repair (BDAR).
4. Validate ORM for recovery.
5. Provide technical guidance to the commander for recovery operations.
6. Supervise recovery operations.
7. Analyze effectiveness of administrative functions.
8. Analyze recovery operations effectiveness.

References:

1. MCO P4790.2
2. TI- 8005-25/12
3. FMFRP 4-34
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-TECH-2035: Manage licensing program for ground ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), personnel records, and equipment.

Standard: Ensure required personnel are trained and licensed per the mission requirements and references.

Performance Steps:

1. Validate licensing requirements.
2. Maintain the licensing program.
3. Validate ORM.
4. Analyze effectiveness of licensing program.

References:

1. MCO 8400.6
2. Applicable Technical Information
3. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-TECH-2036: Manage the joint oil analysis program (JOAP) for ground ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and [NAVMC 10561](#).

Standard: Ensure oil analysis is accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment requiring oil analysis.
2. Analyze results.
3. Direct corrective action.
4. Analyze effectiveness of administrative functions.

References:

1. MCO 4790.2
2. TI 4731-14/1C
3. MCO 4731.1
4. TM 4700-15/1
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 5020.

2110-TECH-2037: Manage unit ammunition control program

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), ammunition records, ammunition, and personnel.

Standard: Ensure mission requirements are sustained per the references.

Performance Steps:

1. Validate ammunition requirements.
2. Register ammunition requirements.
3. Ensure safety of personnel.
4. Ensure ammunition-handling procedures are adhered to.
5. Ensure ammunition accountability is adhered to.
6. Ensure completion of administrative functions.
7. Monitor explosive drivers certification.

References:

1. MCO 1510.78
2. MCO 4340.1
3. MCO 8010.1
4. MCO 8020.10
5. MCO 8025.1
6. MCBul 8011
7. UM 4400-15
8. NAVSEA SW020-AC-SAF-010
9. NAVSEA SW020-AF-ABK-010
10. NAVSEA TWO24-AA-ORD-010

Administrative Instructions: See Administrative Notes, para 5020.

CHAPTER 6

MOS 2111, SMALL ARMS REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	6000	6-1
EVENT CODING.....	6010	6-1
ADMINISTRATIVE NOTES.....	6020	6-1
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	6030	6-2
INDEX OF INDIVIDUAL EVENTS BY LEVEL.....	6040	6-3
1000 LEVEL INDIVIDUAL EVENTS.....	6050	6-4
2000 LEVEL INDIVIDUAL EVENTS.....	6060	6-22

MOS 2111, SMALL ARMS REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

6000. PURPOSE

This chapter contains individual training events for the Small Arms Repairer/Technician.

6010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2111, indicating that the event is for MOS 2111, Small Arms Repairer/Technician.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Weapons Maintenance	WPNS	2111-WPNS-xxxx
Security Functions	SCTY	2111-SCTY-xxxx
Administrative Functions	ADMN	2111-ADMN-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains both 1000-level and 2000-level events.

6020. ADMINISTRATIVE NOTES

1. Maintenance and/or repairs are limited to authorized echelons of maintenance.

2. Automated systems include CD-ROM, Web-based information and all applications of electronic media.

6030. INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA

Event Code	Event	Page
	WEAPONS MAINTENANCE	
2111-WPNS-1001	Maintain armory support equipment	6-4
2111-WPNS-1011	Maintain M9 9MM semiautomatic pistol	6-4
2111-WPNS-1012	Maintain 12 gauge series shotgun	6-5
2111-WPNS-1013	Maintain 5.56MM service rifle	6-5
2111-WPNS-1014	Maintain .50 caliber special application scope rifle	6-6
2111-WPNS-1015	Maintain M203 40mm grenade launcher	6-7
2111-WPNS-1016	Maintain M1911A1 .45 caliber MEU(SOC) pistol	6-7
2111-WPNS-1017	Maintain M249 5.56MM squad automatic weapon (SAW)	6-8
2111-WPNS-1018	Maintain M240 series 7.62MM machine gun	6-9
2111-WPNS-1019	Maintain all variants of .50 caliber machine gun	6-9
2111-WPNS-1020	Maintain machine gun mounts	6-10
2111-WPNS-1021	Maintain MK19 40MM machine gun variants	6-10
2111-WPNS-1022	Maintain MK153 83MM rocket launcher	6-11
2111-WPNS-1023	Maintain M224 60MM mortar with bipod and base plates	6-12
2111-WPNS-1024	Maintain M252 81MM mortar with bipod and base plate	6-12
2111-WPNS-1025	Maintain ground ordnance optical devices	6-13
2111-WPNS-1026	Maintain M40 series sniper rifle	6-13
2111-WPNS-1027	Maintain 7.62MM M14 designated marksman rifle (DMR)	6-14
2111-WPNS-1028	Maintain M823A3	6-15
	SECURITY FUNCTIONS	
2111-SCTY-1031	Ensure weapon security during transportation	6-16
2111-SCTY-1032	Ensure security of personally owned weapons and ammunition	6-16
2111-SCTY-1033	Perform armory procedures	6-17
2111-SCTY-1034	Maintain armory physical security	6-17
	ADMINISTRATIVE FUNCTIONS	
2111-ADMN-1041	Comply with radiological program	6-19
2111-ADMN-1042	Follow basic shop procedures	6-19
2111-ADMN-1043	Follow basic maintenance procedures	6-20
2111-ADMN-1047	Maintain maintenance management training program	6-21
2111-ADMN-1048	Maintain maintenance records and reports	6-21
2111-ADMN-2000	Maintain armory functional areas	6-22
2111-ADMN-2001	Maintain maintenance transaction reports	6-22
2111-ADMN-2002	Maintain armory publication and directives program	6-23

6040. INDEX OF INDIVIDUAL EVENTS BY LEVEL

Event Code	Event	Page
	1000 LEVEL	
2111-WPNS-1001	Maintain armory support equipment	6-4
2111-WPNS-1011	Maintain M9 9MM semiautomatic pistol	6-4
2111-WPNS-1012	Maintain 12 gauge series shotgun	6-5
2111-WPNS-1013	Maintain 5.56MM service rifle	6-5
2111-WPNS-1014	Maintain .50 caliber special application scope rifle	6-6
2111-WPNS-1015	Maintain M203 40mm grenade launcher	6-7
2111-WPNS-1016	Maintain M1911A1 .45 caliber MEU(SOC) pistol	6-7
2111-WPNS-1017	Maintain M249 5.56MM squad automatic weapon (SAW)	6-8
2111-WPNS-1018	Maintain M240 series 7.62MM machine gun	6-9
2111-WPNS-1019	Maintain all variants of .50 caliber machine gun	6-9
2111-WPNS-1020	Maintain machine gun mounts	6-10
2111-WPNS-1021	Maintain MK19 40MM machine gun variants	6-10
2111-WPNS-1022	Maintain MK153 83MM rocket launcher	6-11
2111-WPNS-1023	Maintain M224 60MM mortar with bipod and base plates	6-12
2111-WPNS-1024	Maintain M252 81MM mortar with bipod and base plate	6-12
2111-WPNS-1025	Maintain ground ordnance optical devices	6-13
2111-WPNS-1026	Maintain M40 series sniper rifle	6-13
2111-WPNS-1027	Maintain 7.62MM M14 designated marksman rifle (DMR)	6-14
2111-WPNS-1028	Maintain M823A3	6-15
2111-SCTY-1031	Ensure weapon security during transportation	6-16
2111-SCTY-1032	Ensure security of personally owned weapons and ammunition	6-16
2111-SCTY-1033	Perform armory procedures	6-17
2111-SCTY-1034	Maintain armory physical security	6-17
2111-ADMN-1041	Comply with radiological program	6-19
2111-ADMN-1042	Follow basic shop procedures	6-19
2111-ADMN-1043	Follow basic maintenance procedures	6-20
2111-ADMN-1047	Maintain maintenance management training program	6-21
2111-ADMN-1048	Maintain maintenance records and reports	6-21
	2000 LEVEL	
2111-ADMN-2000	Maintain armory functional areas	6-22
2111-ADMN-2001	Maintain maintenance transaction reports	6-22
2111-ADMN-2002	Maintain armory publication and directives program	6-23

6050. 1000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: WEAPONS MAINTENANCE

2111-WPNS-1001: Maintain armory support equipment

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given applicable equipment, cleaning materials, applicable current authorized technical information, references, automated systems with internet access in a garrison or field environment.

Standard: Ensure armory support equipment is serviceable and ready for use.

Performance Steps:

1. Inspect/Use/Maintain tools.
2. Inspect/Use/Maintain test equipment.
3. Inspect/Use/Maintain pullover gage kit.
4. Inspect/Use/Maintain M3 borescope.
5. Inspect/Use/Maintain Test Set Electrical Systems TS-4348.
6. Inventory kits, sets, chests, and equipment and complete forms.
7. Requisition required items with supporting supply source.

References:

1. 29 CFR 1910.1200
2. MCO P5090.2
3. SC 518-95-CL-A07
4. SL-3-00607A
5. TM 4700-15/1
6. TM 9-243
7. TM 9-4933-258-13&P
8. TM 9-6650-235-13&P

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1011: Maintain M9 9MM semiautomatic pistol

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure pistols are fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform pre-fire inspection (PFI).
4. Perform scheduled preventive maintenance checks and services (PMCS).
5. Identify/Isolate problem.
6. Repair/Replace unserviceable parts and/or components.
7. Secure/Store weapon.
8. Complete maintenance and/or administrative forms and records.

References:

1. TI 8005-24/20
2. TM 1005A-23&P/2A
3. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1012: Maintain 12 gauge series shotguns

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure shotgun is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform pre-fire inspection (PFI).
4. Perform limited technical inspection (LTI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TB 9-1000-247-34
2. TI 8005-24/20
3. TM 4700-15/1
4. Required Technical information for current 12 gauge shotguns

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1013: Maintain 5.56MM service rifle

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure 5.56MM service rifle is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TI 8005-24/20
2. TM 4700-15/1
3. Required Technical information for current 5.56mm Service rifles

Administrative Instructions: The 5.56MM Service Rifle includes but, is not limited to the M16A2 and M4 series. See Administrative Notes, para 6020.

2111-WPNS-1014: Maintain .50 caliber special application scope rifle

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M82A1A caliber scoped rifle is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TI 8005-24/20
2. TM 4700-15/1
3. Required Technical Information current with .50 Caliber (SASR)

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1015: Maintain M203 40MM grenade launcher

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M203 grenade launcher is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.
8. Secure/Store weapon.
9. Complete maintenance administrative forms and records.

References:

1. TB 9-1000-247-34
2. TI 8005-24/20
3. TM 4700-15/1
4. TM 9-1010-221-24&P

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1016: Maintain M1911A1 .45 caliber MEU(SOC) pistol

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison and field environment.

Standard: Ensure M1911A1 .45 Cal. MEU (SOC) Pistol is fully operational per the references.

Performance Steps:

1. Clear the Weapon.
2. Perform Function Check.
3. Perform pre-fire inspection (PFI).
4. Perform limited technical inspection (LTI).
5. Perform Preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TI 8005-24/20
2. TM 00526X-24&P/2
3. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1017: Maintain M249 5.56MM squad automatic weapon (SAW)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M249 5.56MM (SAW) is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TB 9-1000-247-34
2. TI 8005-24/20
3. TM 08671A-23-&P/2A
4. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1018: Maintain M240 series 7.62MM machine guns

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M240 machine gun is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TB 9-1000-247-34
2. TI 8005-24/20
3. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1019: Maintain all variants of .50 caliber machine gun

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure .50 caliber machine gun is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.

8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TB 9-1000-247-34
2. TI 8005-24/20
3. TM 02498A-23&P
4. TM 10152A-24&P
5. TM 4700-15/1
6. TM 10004-25&P/2B

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1020: Maintain machine gun mounts

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M3 tripod mount is fully operational per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform preventive maintenance checks and services (PMCS).
3. Repair/Replace unserviceable parts.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 4700-15/1
2. TM 9-1005-13&P/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1021: Maintain MK19 40MM machine gun variants

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure all variants of the MK19 40MM are operational per the references.

Performance Steps:

1. Clear weapon
2. Perform function check
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts and/or components.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TB 9-1000-247-34
2. TI 8005-24/20
3. TM 08521A-23&P/2A
4. TM 4700-15/1
5. TM 10004-25&P/2B

Administrative Instructions: See Administrative Notes, para 6020. The MK19 variants include MK19 MOD 3 and the variant for the AAV-P7 (A1).

2111-WPNS-1022: Maintain MK 153 83MM rocket launcher

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure MK 153 83MM rocket launcher is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Bore sight weapon.
6. Perform preventive maintenance checks and services (PMCS).
7. Identify/Isolate problem.
8. Repair/Replace unserviceable parts and/or components.
9. Secure/Store weapon.
10. Complete maintenance and/or administrative forms and records.

References:

1. TM 08673A-25&P/2A
2. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1023: Maintain M224 60MM mortar with bipod and base plates

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M224 mortar is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Perform borescope procedure.
7. Perform pullover gage procedure.
8. Identify/Isolate problem.
9. Repair/Replace unserviceable parts and/or components.
10. Secure/Store weapon.
11. Complete maintenance and/or administrative forms and records.

References:

1. TI 8005-24/20
2. TM 08206A-23&P/2
3. TM 9-1000-202-14
4. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1024: Maintain M252 81MM mortar with bipod and base plate

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M252 mortar is fully operational per the references.

Performance Steps:

1. Clear weapon.
2. Perform limited technical inspection (LTI).
3. Perform pre-fire inspection (PFI).
4. Perform preventive maintenance checks and services (PMCS).
5. Perform borescope procedure.

6. Perform pullover gage procedure.
7. Identify/Isolate problem.
8. Repair/Replace unserviceable part and/or components.
9. Secure/Store weapon.
10. Complete required maintenance/administrative forms and records.

References:

1. TI 8005-24/20
2. TM 09922A-23&P/2
3. TM 9-1000-202-14
4. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1025: Maintain ground ordnance optical devices

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given optical equipment, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure ground ordnance optical devices are serviceable per the references.

Performance Steps:

1. Perform operations check.
2. Perform preventive maintenance checks and services (PMCS) on optical devices.
3. Repair/Replace unserviceable parts.
4. Secure/Store weapon.
5. Complete maintenance and/or administrative forms and records.

References:

1. TM 4700-15/1
2. Required technical information for on-hand optical devices

Administrative Instructions: See Administrative Notes, para 6020. The FLC instructs the following optical systems AN/PVS-7, AN/PVS-14, AN/PVS-4, AN/TVS-5, laser boresight, M49 observations telescope, compass, and binoculars.

2111-WPNS-1026: Maintain M40 series sniper rifle

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools, applicable equipment, applicable current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure M40 Series Sniper rifle is fully operational per the references.

Performance Steps:

1. Clear the weapon.
2. Perform function check.
3. Perform limited technical inspection (LTI).
4. Perform pre-fire inspection (PFI).
5. Perform preventive maintenance checks and services (PMCS).
6. Secure/Store weapon.
7. Complete maintenance and/or administrative forms and records.

References:

1. TI 8005-24/20
2. TM 05539C-23&P
3. TM 4700-15/1
4. Required technical information for the current M40 series sniper rifle

Administrative Instructions: See Administrative Notes, para 6020.

2111-WPNS-1027: Maintain 7.62MM M14 designated marksman rifle (DMR)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given tools, equipment, current authorized technical information, and automated systems with internet access in a garrison and field environment.

Standard: Ensure Designated Marksman Rifle (DMR) is fully operational per the references.

Performance Steps:

1. Clear the Weapon.
2. Perform function check.
3. Perform pre-fire inspection (PFI).
4. Perform limited technical inspection (LTI).
5. Perform preventive maintenance checks and services (PMCS).
6. Identify/Isolate problem.
7. Repair/Replace unserviceable parts.
8. Secure/Store weapon.
9. Complete maintenance and/or administrative forms and records.

References:

1. TI 8005-24/20
2. TM 00648C-24&P/2
3. TM 4700-15/1

Administrative Instructions: Maintenance and/or repairs limited to 2nd echelon of maintenance for MOS 2111, MOS 2112 performs all 3rd echelon of maintenance and above. See Administrative Notes #2, para 6020.

2111-WPNS-1028: Maintain M82A3

Initial Training Setting: FS

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M82A3, tool box, and M82A3 inspection checklist.

Standard: Ensure weapon is fully operational per the inspection checklist.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Identify all unserviceable parts or components.
5. Disassemble weapon.
6. Replace all unserviceable parts and/or components.
7. Assemble weapon.
8. Collimate weapon.
9. Perform final inspection.
10. Perform function test.
11. Secure/Store the weapon.
12. Complete all required forms/and records.

References:

1. TM 09629A-23&P/2A
-

FUNCTIONAL AREA: SECURITY FUNCTIONS

2111-SCTY-1031: Ensure weapon security during transportation

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given weapons and ammunition requiring transportation to/from an armory, current authorized technical information, and automated systems with internet access.

Standard: Ensure weapon security is accomplished accurately and safely per the reference.

Performance Steps:

1. Verify that the units picking up or delivering weapons/ammunition have adequate armed guards.
2. Ensure security discrepancies are corrected prior to allowing weapons/ammunition to leave the armory.
3. Report all security violations through the chain of command.

References:

1. MCO 5500.6

Administrative Instructions: See Administrative Notes #2, para 6020.

2111-SCTY-1032: Ensure security of personally owned weapons and ammunition

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an armory facility, personally owned weapons and/or ammunition, current authorized technical information, and automated systems with internet access.

Standard: Provide safe storage, documentation, and issue and recovery procedures per the references.

Performance Steps:

1. Ensure proper documentation is completed for personally owned weapons and ammunition.
2. Accurately annotate brand name and condition of all privately owned gear turned in.
3. Ensure personally owned weapons and ammunition are safely and securely maintained.
4. Ensure appropriate procedures are established for issue and recovery of personally owned weapons and ammunition.

References:

1. Local policies/procedures
2. MCO 8300.1
3. OPNAVINST 5530.13

Administrative Instructions: See Administrative Notes #32, para 6020.

2111-SCTY-1033: Perform armory procedures

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an armory, equipment, personnel, current authorized technical information, and automated systems with internet access in a garrison or field environment.

Standard: Ensure armory procedures are accomplished per the references.

Performance Steps:

1. Ensure security ammunition is properly stored.
2. Ensure security ammunition is properly issued and recovered.
3. Complete required accountability inventories for armory AA&E.
4. Complete required armory NAVMC forms and records.
5. Physically issue/recovery AA&E assets.
6. Comply with armory security procedures.
7. Maintain armory desktop procedures.

References:

1. TM 4700-15/1
2. OPNAVINST 5530.13
3. MCO 5500.6
4. MCO P5530.14
5. MCO P4790.2
6. MCO P4400.150
7. MCO 8020.10
8. UM 4400.124
9. Local Policies and Procedures

Administrative Instructions: See Administrative Notes #2, para 6020.

Current MCI(s):

1. MCI 21.24, Armory Procedures
-

2111-SCTY-1034: Maintain armory physical security

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an armory, current technical information, and automated systems with internet access and security ammunition in a field or garrison environment.

Standard: Ensure armory is in compliance with the references.

Performance Steps:

1. Identify physical security requirements.
2. Evaluate physical security references.
3. Enforce physical security procedures.
4. Maintain Arms, Ammunition & Explosives (AA&E) screenings records.
5. Conduct physical security training.
6. Ensure accountability of (AA&E) within Armory.
7. Correct noted discrepancies.

References:

1. MCO P5530.14
2. OPNAVINST 5530.13
3. OPNAVINST 5530.14
4. MCO 5500.6
5. MCO P4400.150
6. MCO 4340.1
7. MCO 8300.1
8. Current ALMARs
9. Current MARADMINs
10. Applicable Technical Information
11. Table of Organization & Equipment (T/O&E)
12. Local Policies and Procedures

Administrative Instructions: See Administrative Notes #2, para 6020.

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2111-ADMN-1041: Comply with radiological program

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given radiological material, technical manuals, and automated systems with internet access in both a field and garrison environment.

Standard: Ensure radiological safety program includes all assets containing radiological material be stored, used and maintained safely and prevent accidents which may result from exposure to tritium or other radiological sources in a garrison or field environment per the references.

Performance Steps:

1. Identify on hand assets containing radiological material.
2. Utilize required/recommended handling protection when working with unserviceable assets containing radiological material.

References:

1. NAVSEATM-50420-AA-RAD-010
2. MCO 5100.8
3. MCO 5104.2
4. MCO P4400.105
5. TI-5104-15/2
6. TI 01592C-15/1
7. SI 01592C-14/1
8. TI 5104-15/1

Administrative Instructions: See Administrative Notes #2, para 6020.

2111-ADMN-1042: Follow basic shop procedures

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given common tools, power tools, precision measuring tools, current authorized technical information, and automated systems with internet access.

Standard: Maintain assigned work area in the accomplishment of maintenance assignments per the references.

Performance Steps:

1. Organize tools and equipment within work area.
2. Follow instructions for care of tools.

3. Comply with safety regulations.
4. Comply with hazardous material regulations.
5. Comply with LASER safety procedures.

References:

1. Material safety data sheets for hazardous materials
2. 29 CFR 1910.1200
3. DOD INST 6050.5
4. FM 9-243
5. MCO P5090.2
6. TM 10209-10/1
7. Local Policies and Procedures

Administrative Instructions: To comply with 29 CFR 1910.1200 (Hazard Communication), employees who may be exposed to a hazardous material must: (1) have been provided information and training to work with the hazardous chemical prior to their initial assignment; and (2) have access to label information and material safety data sheets to understand the hazard(s), and to identify the necessary personal protective equipment and special precautions to use while working with the chemical. See Administrative Notes #2, para 6020.

2111-ADMN-1043: Follow basic maintenance procedures

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given equipment repair records and forms, and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Utilize required publications and directives.
2. Adhere to Modification Instructions.
3. Adhere to Calibration procedures.
4. Complete maintenance management forms needed to document work.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. UM 4790-5
4. UM 4400-124
5. MCO P5215.17
6. NAVMC 2761
7. SL-1-2
8. SL-1-3
9. TI-4733-15/1
10. TI-4733-15/11
11. MCO 4733.1
12. MCO P4400.150

Current MCI(s):

1. MCI 04.10, MIMMS-AIS (Maintenance Automated Information System)
-

2111-ADMN-1047: Maintain maintenance management training program

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given training records, schedules, and the references.

Standard: Ensure training is properly conducted and documented per the references.

Performance Steps:

1. Maintain maintenance management administrative training.
2. Schedule technical maintenance training.

References:

1. Applicable equipment technical manuals
 2. MCO P4790.2
-

2111-ADMN-1048: Maintain maintenance records and reports

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Provided various maintenance reports, records, and references.

Standard: Ensure records are correct and processed per the references.

Performance Steps:

1. Review Daily Process Report (DPR).
2. Review Daily Transaction Listing.
3. Review Table of Authorized Material (TAM) report.
4. Review Weekly Exception Report.
5. Initiate corrective action for errors on all MIMMS reports.

References:

1. MCO P4790.2
 2. UM 4400-124
-

6060. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2111-ADMN-2000: Maintain armory functional areas

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given an armory, current technical information, automated systems with internet access, security ammunition, and personnel in a field or garrison environment.

Standard: Ensure functional areas are maintained per the references.

Performance Steps:

1. Maintain calibrations control program.
2. Maintain tool control program.
3. Maintain desktop/turnover procedures.
4. Maintain modification control program.
5. Maintain preventive maintenance program.
6. Maintain corrective maintenance program.
7. Maintain quality control program.
8. Maintain training program.
9. Maintain embark program.
10. Apply armory operational risk management (ORM).

References:

1. MCO 1510.65B
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 4733.1
5. MCO P4400.150
6. TI 4733-15/1
7. TI 4733-15/11
8. TI 8000 Series
9. Applicable MI's
10. Current MARADMINs
11. Applicable Technical Information
12. MCO 4400.16
13. UM 4790-5

Administrative Instructions: See Administrative Note #1, para 6020.

2111-ADMN-2001: Maintain maintenance transaction report

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given current technical information and automated systems with internet access in a field or garrison environment.

Standard: Ensure armory maintenance transactions reports are updated per the references.

Performance Steps:

1. Analyze DPR.
2. Verify transactions on the DTL.
3. Verify exception reports.
4. Verify LM2 report.
5. Verify TAM report.
6. Submit maintenance transactions.
7. Conduct required reconciliation's.

References:

1. MCO 4400.16
2. MCO P4790.2
3. TM 4700-15/1
4. UM 4790-5
5. Local Policies and Procedures

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/Automated Information Systems (MIMMS/AIS), Asset Tracking Logistics and Supply System II+ (ATLASS II+). See Administrative Note #2, para 6020.

2111-ADMN-2002: Maintain armory publication and directives program

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given current technical information and automated systems with internet access in a field or garrison environment.

Standard: Ensure required publications and directives are on hand to accomplish the mission per the references.

Performance Steps:

1. Maintain publications requirements based on mission and T/E.
2. Maintain publications and directives on hand.
3. Determine deficiencies.
4. Take corrective actions as required.
5. Maintain armory publication and directives control procedures.

References:

1. MCO P4790.2
2. MCO P5215.17
3. MCO P5600.31

4. NAVMC 2761
5. SL-1-2
6. SL-1-3
7. TI 5600
8. UM-PLMS
9. MCO P5215.1

Administrative Instructions: See Administrative Notes, para 6020.

CHAPTER 7

MOS 2112, PRECISION WEAPONS REPAIRER INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	7000	7-1
EVENT CODING.....	7010	7-1
INDEX OF INDIVIDUAL EVENTS.....	7020	7-2
2000 LEVEL INDIVIDUAL EVENTS.....	7030	7-3

MOS 2112, PRECISION WEAPONS REPAIRER INDIVIDUAL TRAINING

7000. PURPOSE

This chapter contains individual training events for the Precision Weapons Repairer.

7010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2112, indicating that the event is for MOS 2112, Precision Weapons Repairer.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Machine Operations	MACH	2112-MACH-xxxx
Building/Maintaining Weapons	WPNS	2112-WPNS-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains only 2000-level events.

7020. INDEX OF 2000-LEVEL INDIVIDUAL EVENTS

Event Code	Event	Page
	MACHINE OPERATIONS	
2112-MACH-2001	Operate arbor press	7-3
2112-MACH-2002	Operate band saw	7-3
2112-MACH-2003	Operate bead blaster	7-4
2112-MACH-2004	Operate belt sander	7-4
2112-MACH-2005	Operate bench grinder	7-5
2112-MACH-2006	Operate disk sander	7-5
2112-MACH-2007	Operate drill press	7-5
2112-MACH-2008	Operate rotary tool	7-6
2112-MACH-2009	Operate heat treatment oven	7-6
2112-MACH-2010	Operate hydraulic press	7-7
2112-MACH-2011	Operate lathe	7-7
2112-MACH-2012	Operate milling machine	7-8
2112-MACH-2013	Operate oxyacetylene welding equipment	7-8
2112-MACH-2014	Operate polishing machine	7-9
2112-MACH-2015	Operate Rockwell hardness tester	7-9
2112-MACH-2016	Operate surface grinder	7-10
2112-MACH-2017	Operate plasma cutter	7-10
2112-MACH-2018	Operate chop saw	7-11
	BUILDING/MAINTAINING WEAPONS	
2112-WPNS-2021	Build a national match M1911 .45 caliber pistol	7-12
2112-WPNS-2022	Build a MEU(SOC) M1911 .45 caliber pistol	7-12
2112-WPNS-2023	Build a national match M-16 series 5.56MM rifle	7-13
2112-WPNS-2024	Build an M-14/DMR 7.62MM NATO rifle	7-14
2112-WPNS-2025	Build an M-40A3 sniper rifle	7-15
2112-WPNS-2026	Chemically blacken steel	7-15
2112-WPNS-2027	Parkerize steel	7-16
2112-WPNS-2031	Maintain a national Match M1911A1 .45 caliber pistol	7-16
2112-WPNS-2032	Maintain a MEU(SOC) M1911A1 .45 caliber pistol	7-17
2112-WPNS-2033	Maintain a national match M-16 series 5.56MM rifle	7-17
2112-WPNS-2034	Maintain an M-14/DMR 7.62MM NATO rifle	7-18
2112-WPNS-2035	Maintain an M-40A3 sniper rifle	7-18
2112-WPNS-2036	Maintain an M-82A3 special application scoped rifle (SASR)	7-19
2112-WPNS-2037	Maintain Model 41 Smith and Wesson .22 caliber pistol	7-19
2112-WPNS-2038	Maintain model 40X Remington .22 caliber rifle	7-20
2112-WPNS-2041	Test ammunition for use in precision weapons	7-21

7030. 2000 LEVEL INDIVIDUAL TRAINING

FUNCTIONAL AREA: MACHINE OPERATIONS

2112-MACH-2001: Operate arbor press

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an Arbor Press, slide, barrel bushing, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure bushing will fit per the references.

Performance Steps:

1. Observe safety procedures.
2. Select proper arbor.
3. Perform operation.
4. Inspect fit.

References:

1. FM 9-243
 2. TM 00526a-10/1
 3. TM 00526A-24 & P/2
 4. MEU(SOC) Build Procedures
 5. TI 8005-24/20E
-

2112-MACH-2002: Operate band saw

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Band Saw, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Per the references and not to exceed more than 1/8" material left over shop drawings.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Check blade on band saw.
4. Determine proper band speed.
5. Perform cutting operation.
6. Inspect work piece.

References:

1. FM 9-243
2. TC 9-524

3. TM 9-3419-224-10
 4. Machinist Handbook
-

2112-MACH-2003: Operate bead blaster

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Bead Blaster, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure the work piece has a clean uniform finish per the references.

Performance Steps:

1. Observe safety procedures.
2. Place work piece inside bead blaster.
3. Bead blast material.
4. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
-

2112-MACH-2004: Operate belt sander

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Belt Sander, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Per the references and not to exceed more than 1/8" material left over shop drawings.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Sand work piece.
4. Inspect work piece.

References:

1. FM 9-243
 2. Machinist Handbook
-

2112-MACH-2005: Operate bench grinder

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Bench Grinder, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure the work piece is to drawing tolerances per the references.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Adjust tool rest.
4. Perform grinding operation.
5. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
-

2112-MACH-2006: Operate disk sander

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Disk Sander, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Per the references and not to exceed more than 1/8" material left over shop drawings.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Sand work piece.
4. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
-

2112-MACH-2007: Operate drill press

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Drill Press, work piece, safety equipment, and Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure the work piece is to drawing tolerance per the references.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Select cutting speed.
4. Perform drill operation.
5. Inspect work piece

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
-

2112-MACH-2008: Operate rotary tool

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Rotary Tool, work piece, safety equipment, Precision Weapons Repairer Tool Kit, and references.

Standard: Ensure the work piece is completed per the references.

Performance Steps:

1. Observe safety procedures.
2. Perform operation using rotary tool.
3. Inspect work piece.

References:

1. FM 9-243
 2. TI 00526A-25/2B
 3. TI 00526-24/3C
 4. TM 9-1005-211-12P
 5. TM 9-1005-211-35
 6. Nation Match .45 Cal Pistol Build Procedures
 7. TI 8005-24/20E
-

2112-MACH-2009: Operate heat treatment oven

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Heat Treatment Oven, work piece, Rockwell hardness tester, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure the work piece is to drawing tolerances per the references.

Performance Steps:

1. Observe safety procedures.
2. Set oven controls for operation.
3. Perform heat treating procedures, quenching, and tempering as required.
4. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
 4. TO 1-1A9-9
 5. TM 43-01-06
 6. NAVAIR 01-1A3
-

2112-MACH-2010: Operate hydraulic press

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a hydraulic press, work piece, safety equipment, Precision Weapons Repairer Tool Kit, and references.

Standard: Complete the work piece per the references.

Performance Steps:

1. Observe safety procedures.
2. Adjust table height.
3. Select proper holding fixture.
4. Perform pressing or squeezing operation.
5. Inspect work piece.

References:

1. FM 9-243
 2. NM 1911 .45 Build Procedures
 3. TM 02648C - 24 & P/2
 4. DMR Build Procedures
 5. TI 8005 - 24/20E
-

2112-MACH-2011: Operate lathe

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a lathe, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, lathe cutting tools, and shop drawings.

Standard: Ensure the work piece is to drawing tolerance per the references.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Set up lathe for operation.
4. Face material on the lathe.
5. Turn material on the lathe.
6. Perform threading operations on the lathe.
7. Perform drilling operation on the lathe.
8. Bore on the lathe.
9. Knurl on the lathe.
10. Polish on the lathe.
11. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
-

2112-MACH-2012: Operate milling machine

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a milling machine, work piece, safety equipment, precision weapons repairer tool kit, references, mill cutting tools, and shop drawings.

Standard: Ensure the work piece is to drawing tolerance per the references.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Set up mill for operation.
4. Perform facing operation on the mill.
5. Perform contouring operation on the mill.
6. Perform pocketing operation on the mill.
7. Perform angle cutting on the mill.
8. Drill using the mill.
9. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
-

2112-MACH-2013: Operate oxyacetylene welding equipment

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an oxyacetylene welding equipment, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Complete the work piece per the references.

Performance Steps:

1. Observe safety procedures.
2. Set up equipment.
3. Perform oxyacetylene operation.
4. Inspect work piece.

References:

1. FM 9-243
 2. TC 0-237
-

2112-OPRM-2014: Operate polishing machine

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Polishing Machine, work piece, safety equipment, Precision Weapons Repairer Tool Kit, and references.

Standard: Ensure the work piece has a polished and smooth finish.

Performance Steps:

1. Observe safety procedures.
2. Select proper polishing compound.
3. Polish piece to desired finish.
4. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
-

2112-MACH-2015: Operate Rockwell hardness tester

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Rockwell Hardness Tester, test block, safety equipment, Precision Weapons Repairer Tool Kit, and references.

Standard: Obtain correct reading per the references.

Performance Steps:

1. Observe safety procedures.
2. Check tester with test block for hardness range.

References:

1. FM 9-243
 2. TC 9-524
 3. Machinist Handbook
-

2112-MACH-2016: Operate surface grinder

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a surface grinder, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure the work piece is to drawing tolerance per the references.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Perform grinding operation.
4. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
-

2112-MACH-2017: Operate plasma cutter

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a plasma cutter, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure the work piece is in accordance with references and not to exceed more than 1/8" material left over shop drawings.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Select proper tip.
4. Select proper amperage.
5. Perform cutting operation.
6. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
 3. TC 0-237
-

2112-MACH-2018: Operate chop saw

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a chop saw, work piece, safety equipment, Precision Weapons Repairer Tool Kit, references, and shop drawings.

Standard: Ensure the work piece is in accordance with references and not to exceed more than 1/8" material left over shop drawings.

Performance Steps:

1. Observe safety procedures.
2. Layout work piece.
3. Set up stock.
4. Cut material.
5. Inspect work piece.

References:

1. FM 9-243
 2. TC 9-524
-

FUNCTIONAL AREA: BUILDING/MAINTAINING WEAPONS

2112-WPNS-2021: Build a national match M1911 .45 caliber pistol

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a standard M1911A1 .45 Caliber pistol, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M1911A1 match condition replacement parts, test facilities, .45 caliber ammunition, and general shop supplies.

Standard: Per the references so that the weapon will fire three (3), ten (10) shot groups, with an average group size of three (3") inches or less at fifty (50) yards.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Perform match modifications.
6. Refinish weapon.
7. Reassemble weapon.
8. Function check weapon.
9. Proof and function fire weapon.
10. Machine rest weapon and perform accuracy test.
11. Complete maintenance and/or administrative forms or records.

References:

1. TI 00526A-25/2B
2. TI 00526-24/3C
3. TM 9-1005-211-12P
4. TM 9-1005-211-35
5. Nation Match .45 Cal Pistol Build Procedures
6. TI 8005 - 24/20E

Support Requirements:

Ranges/Training Areas: 50-yard range with a machine rest.

Ordinance: .45 Caliber High Pressure Ammunition

2112-WPNS-2022: Build a MEU(SOC) M1911 .45 caliber pistol

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a standard M1911A1 .45 caliber pistol, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M1911A1 MEU(SOC) replacement parts, test facilities, and general shop supplies.

Standard: Per the references so that the weapon is fully operational.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Perform MEU(SOC) modifications.
6. Refinish weapon.
7. Reassemble weapon.
8. Function check weapon.
9. Proof and function fire weapon.
10. Complete maintenance and/or administrative forms or records.

References:

1. TM 00526A-10/1
2. TM 00526A-24 &P/2
3. MEU(SOC) Build Procedures
4. TI 8005-24/20E

Support Requirements:

Ranges/Training Areas: 50 yard range with a machine rest.

Ordinance: .45 Caliber High Pressure Ammunition

2112-WPNS-2023: Build a national match M-16 series M-16 series 5.56MM rifle

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a standard M-16 series 5.56mm rifle, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M-16 series match condition replacement parts, test facilities, and general shop supplies.

Standard: In accordance with references so that the weapon will fire three (3), five (5) shot groups, with an average group size of three (3") inches or less at three hundred (300) yards.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Perform match modifications.
6. Refinish weapon.
7. Reassemble weapon.
8. Function check weapon.

9. Proof and function fire weapon.
10. Machine rest weapon and perform accuracy test.
11. Complete required maintenance and/or administrative forms or records.

References:

1. TM 05538C-23 & P/2A
2. National Match M-16 Build Procedures
3. TI 8005-24/20E

Support Required:

Ranges/Training Areas: 300 yard range with a machine rest.

Ordnance: 5.56 Caliber High Pressure Ammunition

2112-WPNS-2024: Build an M-14/DMR 7.62MM NATO rifle

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a standard M-14 7.62MM NATO rifle, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, DMR replacement parts, test facilities, and general shop supplies.

Standard: In accordance with references so that the weapon will fire three (3), five (5) shot groups, with an average group size of three (3") inches or less at three hundred (300) yards.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Perform DMR modifications.
6. Refinish weapon.
7. Reassemble weapon.
8. Function check weapon.
9. Proof and function fire weapon.
10. Machine rest weapon and perform accuracy test.
11. Complete maintenance and/or administrative forms or records.

References:

1. TM 02648C-24 & P/2
2. DMR Build Procedures
3. TI 8005-24/20E

Support Requirements:

Ranges/Training Areas: 300 yard range with a machine rest.

Ordnance: 7.62mm Caliber High Pressure Ammunition

2112-WPNS-2025: Build an M-40A3 sniper rifle

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Remington model 700 Receiver, safety equipment, Precision Weapons Repairer Tool Kit, ammunition, references, shop equipment, M-40A3 parts, test facilities, and general shop supplies.

Standard: In accordance with references so that the weapon will fire three (3), five (5) shot groups, with an average group size of three (3") inches or less at three hundred (300) yards.

Performance Steps:

1. Perform LTI.
2. Perform M-40A3 parts modification.
3. Refinish weapon.
4. Assemble M-40A3.
5. Function check weapon.
6. Proof and function fire weapon.
7. Machine rest weapon and perform accuracy test.
8. Complete maintenance and/or administrative forms or records.

References:

1. TM 05539D-24 & P/2
2. Sniper Rifle Build Procedures
3. TI 8005-24/20E

Support Requirements:

Ranges/Training Areas: 300 yard range with a machine rest

Ordinance: 7.62mm Caliber High Pressure Ammunition

2112-WPNS-2026: Chemically blacken steel

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given work piece, safety equipment, Precision Weapons Repairer Tool Kit, reference, shop equipment, chemical blackening solution, cleaning solution, chemical blackening stabilizing solution, metal refinishing equipment, and general shop supplies.

Standard: So that work piece has a uniform black shade, in accordance with reference.

Performance Steps:

1. Observe safety procedures.
2. Set up refinish equipment.

3. Prepare work piece for finishing operation.
4. Refinish work piece.
5. Complete maintenance and/or administrative forms or records.

References:

1. Refinishing Procedures
-

2112-WPNS-2027: Parkerize steel

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given work piece, safety equipment, Precision Weapons Repairer Tool Kit, reference, shop equipment, Parkerizing solution, cleaning solution, metal refinishing equipment, and general shop supplies.

Standard: So that the work piece has a uniform black shade, in accordance with the reference.

Performance Steps:

1. Observe safety procedures.
2. Set up refinish equipment.
3. Bead Blast work piece.
4. Refinish work piece.
5. Complete maintenance and/or administrative forms or records.

References:

1. Refinishing Procedures
-

2112-WPNS-2031: Maintain a national match M1911A1 .45 caliber pistol

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a National Match M1911A1 .45 caliber pistol, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M1911A1 match condition replacement parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.

8. Complete maintenance and/or administrative forms or records.

References:

1. TI 00526A-25/2B
 2. TI 00526-24/3C
 3. TM 9-1005-211-12P
 4. TM 9-1005-211-35
 5. Nation Match .45 Cal Pistol Build Procedures
 6. TI 8005-24/20E
-

2112-WPNS-2032: Maintain a MEU(SOC) M1911A1 .45 caliber pistol

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a MEU(SOC) M1911A1 .45 caliber pistol, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M1911A1 MEU(SOC) replacement parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.
8. Complete maintenance and/or administrative forms or records.

References:

1. TM00526A-10/1
 2. TM 00526A-24 &P/2
 3. MEU(SOC) Build Procedures
 4. TI 8005-24/20E
-

2112-WPNS-2033: Maintain a national match M-16 series 5.56MM rifle

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a National Match M-16 series 5.56mm rifle, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M-16 series match condition replacement parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.
8. Complete maintenance and/or administrative forms or records.

References:

1. TM 05538C-23 & P/2A
 2. National Match M-16 Build Procedures
 3. TI 8005-24/20E
-

2112-WPNS-2034: Maintain an M-14/DMR 7.62MM NATO rifle

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a M-14/DMR 7.62MM NATO rifle, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, DMR replacement parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.
8. Complete maintenance and/or administrative forms or records.

References:

1. TM 02648C-24 & P/2
 2. DMR Build Procedures
 3. TI 8005-24/20E
-

2112-WPNS-2035: Maintain an M-40A3 sniper rifle

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M-40A3 Sniper Rifle, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M-40A3 parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.
8. Complete maintenance and/or administrative forms or records.

References:

1. TM-05539D-24 & P/2
 2. Sniper Rifle Build Procedures
 3. TI 8005-24/20E
-

2112-WPNS-2036: Maintain an M-82A3 special application scoped rifle (SASR)

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M-82A3 SASR, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, M-82A3 parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.
8. Complete maintenance and/or administrative forms or records.

References:

1. TM 09629A-23&P/2A
 2. TI 8005 - 24/20E
-

2112-WPNS-2037: Maintain model 41 Smith and Wesson .22 caliber pistol

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Model 41 S&W .22 caliber pistol, safety equipment, Precision Weapons Repairer Tool Kit, reference, shop equipment, Model 41 replacement parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with the reference.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.
8. Complete maintenance and/or administrative forms or records.

References:

1. TI 8005-24/20E
-

2112-WPNS-2038: Maintain model 40X Remington .22 caliber rifle

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a Model 40X Remington .22 caliber rifle, safety equipment, Precision Weapons Repairer Tool Kit, references, shop equipment, Model 41 replacement parts, and general shop supplies.

Standard: So that the weapon is fully operational, in accordance with references.

Performance Steps:

1. Clear weapon.
2. Perform function check.
3. Perform LTI.
4. Disassemble weapon.
5. Repair and/or replace all unserviceable parts and/or components.
6. Assemble weapon.
7. Function check weapon.
8. Complete maintenance and/or administrative forms or records.

References:

1. Manufacturer's Maintenance Manual
 2. TI 8005-24/20E
-

2112-WPNS-2041: Test ammunition for use in precision weapons

Initial Training Setting: MOJT

Sustainment Interval: 48

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given weapons, ammunition for test, written request for test, safety equipment, Precision Weapons Repairer Tool Kit, test facility, and references.

Standard: To ensure that a written recommendation for ammunition is submitted per the references and other specifications.

Performance Steps:

1. Observe safety procedures.
2. Order test lots of ammunition.
3. Test each lot.
4. Select best test lot.
5. Match test lot to each weapon when required.
6. Provide written report on ammunition test.

References:

1. MCO 3591.14
 2. MCO 8373.2
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CHAPTER 8

MOS 2120, WEAPONS REPAIR OFFICER INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	8000	8-1
EVENT CODING.....	8010	8-1
ADMINISTRATIVE NOTES.....	8020	8-1
INDEX OF INDIVIDUAL EVENTS.....	8030	8-2
2000 LEVEL INDIVIDUAL EVENTS.....	8040	8-3

MOS 2120, WEAPONS REPAIR OFFICER INDIVIDUAL TRAINING

8000. PURPOSE

This chapter contains individual training events for the Weapons Repair Officer.

8010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2120, indicating that the event is for MOS 2120, Weapons Repair Officer.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Administrative Functions	ADMN	2120-ADMN-xxxx
Technical Functions	TECH	2120-TECH-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains only 2000-level events.

8020. ADMINISTRATIVE NOTES

1. Various staff assignments will include but are not limited to Headquarters, Marine Corps (HQMC), post, bases, stations, divisions, regiments, battalions, and companies. Due to the scope of duties and responsibilities at each level the grade/rank structures will vary.

a. Posts, bases, stations, regiments, and battalions - CW03.

b. Posts, bases, stations, and Headquarters Marine Corps - CW05.

2. Automated systems include CD-ROM, web based information and all applicable electronic media.

8030. INDEX OF 2120 2000-LEVEL INDIVIDUAL EVENTS BY FUNCTIONAL AREA

Event Code	Event	Page
	ADMINISTRATIVE FUNCTIONS	
2120-ADMN-2001	Manage the unit ground ordnance maintenance operations	8-3
2120-ADMN-2002	Employ ground ordnance equipment maintenance management programs	8-4
2120-ADMN-2003	Manage ground ordnance equipment maintenance resources	8-5
2120-ADMN-2004	Manage technical information and directives for ground ordnance maintenance	8-6
2120-ADMN-2005	Monitor maintenance shop level MOS training program	8-6
2120-ADMN-2006	Manage support equipment programs for ground ordnance equipment	8-7
2120-ADMN-2007	Manage supply support procedures for ground ordnance equipment	8-8
2120-ADMN-2008	Manage ground ordnance maintenance facilities	8-8
2120-ADMN-2009	Manage maintenance production schedule for ground ordnance equipment	8-9
2120-ADMN-2010	Manage maintenance related programs for ground ordnance equipment	8-10
2120-ADMN-2011	Manage preventive maintenance checks and services (PMCS) programs for ground ordnance equipment	8-10
2120-ADMN-2012	Manage corrective maintenance program for ground ordnance equipment	8-11
2120-ADMN-2013	Manage modification programs for ground ordnance equipment	8-12
2120-ADMN-2014	Monitor environmental compliance for ground ordnance equipment	8-12
2120-ADMN-2015	Manage shop safety program	8-13
2120-ADMN-2016	Manage embarkation program for ground ordnance equipment	8-14
2120-ADMN-2017	Manage maintenance shop information requirements	8-15
2120-ADMN-2018	Prepare routine correspondence, messages, staff papers, and policy letters for ground ordnance equipment	8-15
2120-ADMN-2019	Manage physical security programs for ground ordnance equipment	8-16
2120-ADMN-2020	Assist in the fielding of ground ordnance equipment	8-17
	TECHNICAL FUNCTIONS	
2120-TECH-2031	Serve as the technical adviser for ground ordnance weapons	8-18
2120-TECH-2032	Provide technical management for the repair of ground ordnance weapons	8-20
2120-TECH-2033	Manage unit ammunition control program	8-22
2120-TECH-2034	Perform duties as load test certification officer	8-22
2120-TECH-2035	Direct recovery operations for artillery	8-23
2120-TECH-2036	Manage the joint oil analysis program (JOAP) for ground ordnance vehicles	8-23

8040. 2000 LEVEL WEAPONS REPAIR OFFICER INDIVIDUAL TRAINING

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2120-ADMN-2001: Manage the unit ground ordnance maintenance operations

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), equipment records, automated systems with internet access, and references.

Standard: Ensure ground ordnance equipment remains combat ready.

Performance Steps:

1. Determine mission requirements.
2. Focus ground ordnance equipment maintenance effort to maximize combat effectiveness.

References:

1. CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARS
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP-4
11. MCO 1510 Series, Individual Training Standard
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82
27. MCO 4420.15
28. MCO 4450.12
29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15
32. MCO 4710.8
33. MCO 4733.1

34. MCO 4790.18
35. MCO 4790.2
36. MCO 4855.10
37. MCO 5100.29
38. MCO 5100.8
39. MCO 5104.3
40. MCO 5215.1
41. MCO 5215.17
42. MCO 5500.6
43. MCO 5530.14
44. MCO 8300.1
45. MCO 8400.6
46. MCO P11240.106
47. MCO P11262.2
48. MCO P1200.7
49. MCO P4400.105
50. MCO P4400.150
51. MCO P4600.14
52. MCO P4600.19
53. MCO P4610.19
54. MCO P4790.1
55. MCO P4790.2
56. MCO P4790.3
57. MCO P5090.2
58. MCO P5600.31
59. MCRP 3-OA
60. MCRP 3-OB
61. MCWP 3-1
62. MCWP 4-1
63. MSE/Unit embarkation
64. NAVFAC P307
65. NAVSEATM 50420-AA-RAD-010
66. OPNAVINST 5530.13
67. OPNAVINST 5530.14
68. SECNAVINST 5216.5
69. SL 1-2/Sl 1-3
70. Table of Organization & Equipment (T/O&E)
71. TB MED 524
72. TI 4733-15/1
73. TI 4733-15/11
74. TM 4700-15/1
75. TM 4795-12
76. TM 4795-34
77. UM 4400-124
78. UM 4790-5
79. UM-MCPDS
80. UM-PLMS

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2002: Employ ground ordnance equipment maintenance management programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, and applicable references.

Standard: Ensure all applicable maintenance management programs are established per the references.

Performance Steps:

1. Validate mission requirements.
2. Analyze capabilities.
3. Validate resource requirements.
4. Analyze external requirements.
5. Anticipate future maintenance requirements.
6. Develop procedures utilizing functional areas of maintenance management.
7. Implement maintenance management programs.
8. Manage maintenance management programs.

References:

1. MCO P4790.2
2. MCO P1200.7
3. MCO 3000.11
4. TM 4700-15/1
5. Applicable Technical Information
6. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2003: Manage ground ordnance equipment maintenance resources

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, personnel, maintenance facility, and a budget.

Standard: Ensure maintenance resources are focused on ordnance equipment readiness and are maintained in accordance with the references and commanders intent.

Performance Steps:

1. Determine required resources.
2. Prioritize available resources.
3. Plan employment of available resources.
4. Organize available resources.
5. Coordinate available resources.

References:

1. MCO P4790.2
2. Table of Organization & Equipment (T/O&E)
3. TM 4700-15/1
4. MCO 4400.150

5. MCWP 4-1
6. MCDP-4
7. MCO 4733.1
8. MCO 4710.8
9. MCO 5215.1
10. MCO 5215.17
11. MCO P5600.31
12. MCO P4400.82
13. MCO 3000.11
14. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2004: Manage technical information and directives for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, mission requirements, and references.

Standard: Ensure the quantity, serviceability, and accountability of all information sources is maintained per the references.

Performance Steps:

1. Validate requirements.
2. Register requirements.
3. Manage the publications control program.

References:

1. MCO P4790.2
2. MCO P5215.1
3. MCO 5600.31
4. Table of Organization & Equipment (T/O&E)
5. UM-PLMS
6. SL 1-2/Sl 1-3
7. UM-MCPDS

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2005: Monitor maintenance shop level MOS training program

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, personnel records, and mission requirements.

Standard: Ensure personnel are trained per the references.

Performance Steps:

1. Validate requirements.
2. Coordinate MOS training.
3. Direct MOS training.
4. Analyze MOS training effectiveness.

References:

1. MCO 1510 Series
2. MCO P4790.2
3. MCO 1553.3
4. MCO 1553.2
5. MCRP 3-OA
6. MCRP 3-OB
7. MCWP 4-1
8. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2006: Manage support equipment programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, and references.

Standard: Ensure support equipment and maintenance programs are implemented per applicable references.

Performance Steps:

1. Validate requirements.
2. Ensure control procedures are established.
3. Ensure Preventive Maintenance Checks and Services (PMCS) is conducted.
4. Ensure corrective maintenance is conducted.
5. Analyze effectiveness of support program.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. MCO 4733.1
4. MCO P4790.2
5. TI 4733-15/1
6. TI 4733-15/11
7. Current MARADMINs
8. Applicable Technical Information
9. Table of Organization & Equipment (T/O&E)
10. Local Policies and Procedures

Administrative Instructions: The term support equipment includes but is not limited to tool sets, kits, chests, hoists, jacks, stands, and TMDE (calibration equipment). See Administrative Notes, para 8020.

2120-ADMN-2007: Manage supply support procedures for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, unit budget, mission requirements, and references.

Standard: Ensure all supply procedures are accomplished per the mission requirements and references.

Performance Steps:

1. Validate supply support requirements.
2. Coordinate requisition procedures.
3. Direct the accountability of all repair parts.
4. Direct validation procedures.
5. Direct reconciliation procedures.
6. Coordinate with internal supply support agencies.
7. Coordinate with external supply support agencies.
8. Validate budget requirements.

References:

1. MCO P4400.82
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 8300.1
5. MCO 4340.1
6. MCO P4400.150
7. MCO 4400.16
8. UM 4400-124
9. Local Policies and Procedures
10. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2008: Manage ground ordnance maintenance facilities

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, maintenance facilities, mission requirements and references.

Standard: Ensure maintenance facilities are established per the mission requirements and references.

Performance Steps:

1. Validate requirements.
2. Validate maintenance flow plan.
3. Validate facilities to support mission.
4. Validate operational risk management procedures.
5. Prioritize use of facilities.
6. Ensure facilities are maintained.

References:

1. MCO P4790.1
2. MCO P4790.2
3. Applicable Technical Information
4. MCO P11262.2
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2009: Manage maintenance production schedule for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, Table of Organization & Equipment (T/O&E), automated systems with internet access, automated reports, equipment records, and maintenance resources.

Standard: Ensure maintenance production flow is accomplished per the mission requirements, resources, and references.

Performance Steps:

1. Validate production capability.
2. Prioritize maintenance effort.
3. Validate available resources.
4. Analyze quality control effectiveness.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCBUL 3000
5. Table of Organization & Equipment (T/O&E)
6. Applicable Technical Information
7. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2010: Manage maintenance related programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure maintenance related programs are employed per the mission requirements and references.

Performance Steps:

1. Validate mission requirements.
2. Manage Product Quality Deficiency Report (PQDR) program.
3. Manage Corrosion Prevention and Control (CPAC) program.
4. Manage a Quality Control (QC) program.
5. Manage unit level execution of Depot Level Maintenance programs.
6. Manage execution of Contract Logistic Support (CLS).
7. Manage execution of warranty programs.
8. Manage demilitarization procedures.
9. Manage Military Awards/Incentives Program.

References:

1. MCO P4790.2
2. MCO 4733.1
3. MCO 4855.10
4. MCO P4790.1
5. MCO 4105.2
6. MCO 1650.17
7. MCO P4790.3
8. MCO 3000.11
9. MCO 4790.18
10. MCBUL 3000
11. TM 4795-12
12. TM 4795-34
13. TM 4750-15/1
14. DOD 4160.21-M-1
15. Applicable Unit Logistics Support Summary (ULSS)
16. Applicable Technical Information
17. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2011: Manage preventive maintenance checks and services (PMCS) programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure preventive maintenance checks and services are accomplished per the mission requirements and references.

Performance Steps:

1. Validate PMCS requirements.
2. Validate cyclic maintenance requirements.
3. Validate special maintenance requirements.
4. Validate deferred maintenance requirements.
5. Validate PMCS schedule.
6. Manage documentation of PMCS program.
7. Manage Quality Control (QC) procedures for PMCS program.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCBUL 3000
5. MCO 4400.16
6. TM 4700-15/1
7. Applicable Technical Information
8. Local policies and procedures
9. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2012: Manage corrective maintenance program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure corrective maintenance is accomplished per the mission requirements and references.

Performance Steps:

1. Validate corrective maintenance requirements.
2. Monitor applicable maintenance procedures.
3. Monitor applicable reporting procedures.
4. Analyze quality control effectiveness.
5. Coordinate with external maintenance activities.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCO 4400.16
5. MCO 4400.82

6. MCO 4400.150
7. MCBUL 3000
8. TM 4700-15/1
9. Local Policies and Procedures
10. Applicable Technical Information
11. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2013: Manage modification programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment modifications are accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment-requiring modification.
2. Monitor modification program.
3. Verify completion of administrative requirements.
4. Analyze modification program effectiveness.

References:

1. MCO P4790.2
2. MCO P4790.1
3. Table of Organization & Equipment (T/O&E)
4. TM 4700-15/1
5. Applicable MI's

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2014: Monitor environmental compliance for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: To ensure that environmental compliance procedures are observed per the mission requirements and references.

Performance Steps:

1. Validate environmental compliance requirements.

2. Coordinate with unit environmental compliance representative.
3. Direct corrective actions.
4. Analyze effectiveness of program.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P5090.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. MCO 4450.12
9. TB MED 524
10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current MARADMINs
13. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of environment compliance encompasses but is not limited to the following areas of concern: radiation safety, Hazardous Material (HAZMAT) handling procedures, Depleted Uranium (DU) hazards, Nuclear Regulatory Commission (NRC) Licenses, Material Safety Data Sheets (MSDS). See Administrative Notes, para 8020.

2120-ADMN-2015: Manage shop safety program

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure shop safety practices are observed per the mission requirements and references.

Performance Steps:

1. Validate safety program requirements.
2. Supervise compliance with shop safety procedures.
3. Direct corrective actions.
4. Analyze effectiveness of program.

References:

1. 0929 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P50.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. MCO 4450.12
9. TB MED 524

10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current MARADMINs
13. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of safety encompasses all aspects of ground safety, which includes but is not limited to the following areas of concern: radiation safety, laser safety, Occupational Safety & Health Administration (OSHA) regulations & policies, Material Safety Data Sheets (MSDS), battery rooms, Personal Protective Equipment (PPE), heat conditions, fire protection, medical surveillance programs, and industrial hygiene. See Administrative Notes, para 8020.

2120-ADMN-2016: Manage embarkation program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment is embarked per the mission requirements and references.

Performance Steps:

1. Validate embarkation requirements.
2. Ensure that requirements are documented.
3. Coordinate with embarkation personnel.
4. Manage the preparation of equipment for embark.

References:

1. MSE/Unit embarkation
2. Table of Organization & Equipment (T/O&E)
3. MCO 4030.16
4. MCO 4030.19
5. MCO 4030.25
6. MCO 4030.33
7. MCO 4030.36
8. MCO 4110.2
9. MCO 4400.16
10. MCO P4400.150
11. MCO P4600.14
12. MCO P4600.19
13. MCO 4600.25
14. MCO 4600.30
15. MCO 4610.15
16. MCO P4610.19

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2017: Manage maintenance shop information requirements

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment information is completed per the mission requirements and references.

Performance Steps:

1. Validate maintenance information requirements.
2. Validate required output reports.
3. Manage completion of maintenance resource reports.
4. Analyze performance indicators of reports.
5. Conduct trend analysis of reports.
6. Direct corrective action.
7. Review message traffic for information concerning ground ordnance equipment.

References:

1. MCO P4790.2
2. Current ALMARs
3. Current MARADMINs
4. Applicable Technical Information
5. Local Policies and Procedures
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/ Automated Information Systems, MIMMS (AIS), Asset Tracking Logistics, Supply System II+ (ATLASS II+), and Defense Message System (DMS). See Administrative Notes, para 8020.

2120-ADMN-2018: Prepare routine correspondence, messages, staff papers, and policy letters for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and the information required to be published.

Standard: Ensure routine correspondence, messages, staff papers, and policy letters are completed per the mission requirements and references.

Performance Steps:

1. Prepare correspondence, as required.

2. Prepare messages, as required.
3. Prepare reports, as required.
4. Prepare staff papers, as required.
5. Prepare policy letters, as required.
6. Review all correspondence submitted by subordinates.
7. Direct correspondence filing procedures.
8. Staff correspondence to higher and adjacent agencies.

References:

1. MCO P1070.12
2. SECNAVINST 5216.5
3. MCWP 3-1
4. Local policies and procedures
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2019: Manage physical security programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, equipment records, and ground ordnance equipment storage facilities.

Standard: Ensure ground ordnance equipment is safeguarded from theft/tampering per the mission requirements and references.

Performance Steps:

1. Validate security requirements.
2. Analyze the established security procedures for adequacy.
3. Validate compliance of security requirements for facilities.
4. Ensure personnel are security trained.
5. Conduct AA&E personnel screenings.
6. Analyze effectiveness of security programs.

References:

1. MCO 5530.14
2. OPNAVINST 5530.13
3. OPNAVINST 5530.14
4. MCO 5500.6
5. MCO P4400.150
6. MCO 8300.1
7. Current ALMARs
8. Current MARADMINs
9. Applicable Technical Information
10. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-ADMN-2020: Assist in the fielding of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure the equipment fielding is supported and accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment fielding requirements.
2. Review fielding documents.
3. Assist in fielding plan.
4. Coordinate placement of equipment into service.
5. Coordinate staff functions to determine priority of fielding.
6. Monitor completion of administrative functions.

References:

1. MCO P4790.2
2. Applicable Technical Information
3. Applicable Unit Logistics Support Summary (ULSS)
4. MCO 4420.15
5. MCO 8300.1
6. MCO P4400.82
7. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

FUNCTIONAL AREA: TECHNICAL FUNCTIONS

2120-TECH-2031: Serve as the technical advisor for ground ordnance weapons

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Provided with guidance and command philosophy from the Commanding Officer and his staff in accordance with the applicable references.

Standard: Ensure unit readiness is sustained at an acceptable level and provide recommendations to the Commanding Officer regarding operations and maintenance of ground ordnance equipment.

Performance Steps:

1. Prepare information on all matters relating to ground ordnance weapons.
2. Provide guidance on all matters relating to ground ordnance weapons.
3. Provide recommendations on all matters relating to ground ordnance weapons.
4. Conduct internal reviews.

References:

1. 29 CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARS
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP-4
11. MCO 1510 Series
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82
27. MCO 4420.15
28. MCO 4450.12
29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15

- 32. MCO 4710.8
- 33. MCO 4733.1
- 34. MCO 4790.18
- 35. MCO 4790.2
- 36. MCO 4855.10
- 37. MCO 5100.29
- 38. MCO 5100.8
- 39. MCO 5104.3
- 40. MCO 5215.1
- 41. MCO 5215.17
- 42. MCO 5500.6
- 43. MCO 5530.14
- 44. MCO 8300.1
- 45. MCO 8400.6
- 46. MCO P11240.106
- 47. MCO P11262.2
- 48. MCO P1200.7
- 49. MCO P4400.105
- 50. MCO P4400.150
- 51. MCO P4600.14
- 52. MCO P4600.19
- 53. MCO P4610.19
- 54. MCO P4790.1
- 55. MCO P4790.2
- 56. MCO P4790.3
- 57. MCO P5090.2
- 58. MCO P5600.31
- 59. MCRP 3-OA
- 60. MCRP 3-OB
- 61. MCWP 3-1
- 62. MCWP 4-1
- 63. MSE/Unit Embarkation
- 64. NAVFAC P307
- 65. NAVSEATM 50420-AA-RAD-010
- 66. OPNAVINST 5530.13
- 67. OPNAVINST 5530.14
- 68. SECNAVINST 5216.5
- 69. SL 1-2/Sl 1-3
- 70. Table of Organization & Equipment (T/O&E)
- 71. TB MED 524
- 72. TI 4733-15/1
- 73. TI 4733-15/11
- 74. TM 4700-15/1
- 75. TM 4795-12
- 76. TM 4795-34
- 77. UM 4400-124
- 78. UM 4790-5
- 79. UM-MCPDS
- 80. UM-PLMS

Administrative Instructions: Ground ordnance weapons include small arms weapons, ground ordnance Electro-Optical equipment, and artillery. See Administrative Notes, para 8020.

2120-TECH-2032: Provide technical management for the repair of ground ordnance weapons

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), personnel, personnel records, equipment, equipment records, and maintenance facilities.

Standard: Ensure maintenance of ground ordnance weapons is accomplished per the mission requirements and references.

Performance Steps:

1. Anticipate requirements.
2. Validate requirements.
3. Validate deficiencies.
4. Direct maintenance solutions.
5. Manage maintenance effort.
6. Manage maintenance personnel.
7. Ensure safety of personnel.
8. Analyze effectiveness of administrative functions.
9. Focus ground ordnance equipment maintenance efforts to maximize combat effectiveness.

References:

1. 29 CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARS
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP-4
11. MCO 1510 Series
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82
27. MCO 4420.15
28. MCO 4450.12

29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15
32. MCO 4710.8
33. MCO 4733.1
34. MCO 4790.18
35. MCO 4790.2
36. MCO 4855.10
37. MCO 5100.29
38. MCO 5100.8
39. MCO 5104.3
40. MCO 5215.1
41. MCO 5215.17
42. MCO 5500.6
43. MCO 5530.14
44. MCO 8300.1
45. MCO 8400.6
46. MCO P11240.106
47. MCO P11262.2
48. MCO P1200.7
49. MCO P4400.105
50. MCO P4400.150
51. MCO P4600.14
52. MCO P4600.19
53. MCO P4610.19
54. MCO P4790.1
55. MCO P4790.2
56. MCO P4790.3
57. MCO P5090.2
58. MCO P5600.31
59. MCRP 3-OA
60. MCRP 3-OB
61. MCWP 3-1
62. MCWP 4-1
63. MSE/Unit Embarkation
64. NAVFAC P307
65. NAVSEATM 50420-AA-RAD-010
66. OPNAVINST 5530.13
67. OPNAVINST 5530.14
68. SECNAVINST 5216.5
69. SL 1-2/Sl 1-3
70. Table of Organization & Equipment (T/O&E)
71. TB MED 524
72. TI 4733-15/1
73. TI 4733-15/11
74. TM 4700-15/1
75. TM 4795-12
76. TM 4795-34
77. UM 4400-124
78. UM 4790-5
79. UM-MCPDS
80. UM-PLMS

Administrative Instructions: See Administrative Notes, para 8020.

2120-TECH-2033: Manage unit ammunition control program

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), ammunition records, ammunition, and personnel.

Standard: Ensure mission requirements are sustained per the references.

Performance Steps:

1. Validate ammunition requirements.
2. Register ammunition requirements.
3. Ensure safety of personnel.
4. Ensure ammunition-handling procedures are adhered to.
5. Ensure ammunition accountability is adhered to.
6. Ensure completion of administrative functions.
7. Monitor explosive drivers certification.

References:

1. MCO 1510.78
2. MCO 4340.1
3. MCO 8010.1
4. MCO 8020.10
5. MCO 8025.1
6. MCBul 8011
7. UM 4400-15
8. NAVSEA SWO20-AC-SAF-010
9. NAVSEA SWO20-AF-ABK-010
10. NAVSEA TWO24-AA-ORD-010

Administrative Instructions: See Administrative Notes, para 8020.

2120-TECH-2034: Perform duties as load test certification officer

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, and equipment records.

Standard: Ensure load testing is conducted, certified, and maintained per the mission requirements and references.

Performance Steps:

1. Validate load test condition inspection requirements.
2. Establish a load test certification schedule.
3. Certify annual condition inspections.
4. Assign test director.
5. Assign test inspectors.
6. Coordinate load testing with supporting agencies.
7. Analyze effectiveness of administrative functions.

References:

1. MCO P11240.106

2. MCO P11262.2
3. NAVFAC P307
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-TECH-2035: Direct recovery operations for artillery

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and equipment.

Standard: Ensure the recovery of artillery pieces is safely accomplished per the mission requirements and references.

Performance Steps:

1. Supervise recovery training.
2. Validate recovery requirements.
3. Validate Battle Damage Assessment and Repair (BDAR).
4. Validate ORM for recovery.
5. Provide technical guidance to the commander for recovery operations.
6. Supervise recovery operations.
7. Analyze effectiveness of administrative functions.
8. Analyze recovery operations effectiveness.

References:

1. MCO P4790.2
2. Applicable Technical Information
3. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

2120-TECH-2036: Manage the joint oil analysis program (JOAP) for ground ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CW02, CW03, CW04, CW05

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and [NAVMC 10561](#).

Standards: To ensure that the oil analysis is accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment requiring oil analysis.
2. Analyze results.
3. Direct corrective action.
4. Analyze effectiveness of administrative functions.

References:

1. MCO 4790.2
2. TI 4731-14/1C
3. MCO 4731.1
4. TM 4700-15/1
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 8020.

CHAPTER 9

MOS 2125, ELECTRO-OPTIC INSTRUMENT REPAIR OFFICER INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	9000	9-1
EVENT CODING.....	9010	9-1
ADMINISTRATIVE NOTES.....	9020	9-1
INDEX OF INDIVIDUAL EVENTS.....	9030	9-2
2000 LEVEL INDIVIDUAL EVENTS.....	9040	9-3

MOS 2125, ELECTRO-OPTIC INSTRUMENT REPAIR OFFICER INDIVIDUAL TRAINING

9000. PURPOSE

This chapter contains individual training events for the Weapons Repair Officer.

9010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2125, indicating that the event is for MOS 2125, Electro-Optics Instrument Repair Officer.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Administrative Functions	ADMN	2125-ADMN-xxxx
Technical Functions	TECH	2125-TECH-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains only 2000-level events.

9020. ADMINISTRATIVE NOTES

1. Various staff assignments will include but are not limited to Headquarters, Marine Corps (HQMC), post, bases, stations, divisions, regiments, battalions, and companies. Due to the scope of duties and responsibilities at each level the grade/rank structure will vary.

a. Posts, bases, stations, regiments, and battalions - CW03.

b. Posts, bases, stations, and Headquarters Marine Corps - CW04.

2. Automated systems include CD-ROM, web based information and all applicable electronic media.

9030. INDEX OF 2000-LEVEL INDIVIDUAL EVENTS

Event Code	Event	Page
	ADMINISTRATIVE FUNCTIONS	
2125-ADMN-2001	Manage the unit ground ordnance maintenance operations	9-3
2125-ADMN-2002	Employ ground ordnance equipment maintenance management programs	9-4
2125-ADMN-2003	Manage ground ordnance equipment maintenance resources	9-5
2125-ADMN-2004	Manage technical information and directives for ground ordnance maintenance	9-6
2125-ADMN-2005	Monitor maintenance shop level MOS training program	9-6
2125-ADMN-2006	Manage support equipment programs for ground ordnance equipment	9-7
2125-ADMN-2007	Manage supply support procedures for ground ordnance equipment	9-8
2125-ADMN-2008	Manage ground ordnance maintenance facilities	9-8
2125-ADMN-2009	Manage maintenance production schedule for ground ordnance equipment	9-9
2125-ADMN-2010	Manage maintenance related programs for ground ordnance equipment	9-10
2125-ADMN-2011	Manage preventive maintenance checks and services (PMCS) programs for ground ordnance equipment	9-10
2125-ADMN-2012	Manage corrective maintenance program for ground ordnance equipment	9-11
2125-ADMN-2013	Manage modification programs for ground ordnance equipment	9-12
2125-ADMN-2014	Monitor environmental compliance for ground ordnance equipment	9-12
2125-ADMN-2015	Manage shop safety program	9-13
2125-ADMN-2016	Manage embarkation program for ground ordnance equipment	9-14
2125-ADMN-2017	Manage maintenance shop information requirements	9-15
2125-ADMN-2018	Prepare routine correspondence, messages, staff papers, and policy letters for ground ordnance equipment	9-15
2125-ADMN-2019	Manage physical security programs for ground ordnance equipment	9-16
2125-ADMN-2020	Assist in the fielding of ground ordnance equipment	9-17
	TECHNICAL FUNCTIONS	
2125-TECH-2031	Serve as the technical adviser for electro-optical ordnance equipment	9-18
2125-TECH-2032	Provide technical management for the repair of electro-optical ordnance equipment	9-20
2125-TECH-2033	Manage unit ammunition control program	9-22

9040. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2125-ADMN-2001: Manage the unit ground ordnance maintenance operations

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), equipment records, automated systems with internet access, and references.

Standard: Ensure ground ordnance equipment remains combat ready.

Performance Steps:

1. Determine mission requirements.
2. Focus ground ordnance equipment maintenance effort to maximize combat effectiveness.

References:

1. CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARs
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP-4
11. MCO 1510 Series, Individual Training Standard
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82
27. MCO 4420.15
28. MCO 4450.12
29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15
32. MCO 4710.8
33. MCO 4733.1

34. MCO 4790.18
35. MCO 4790.2
36. MCO 4855.10
37. MCO 5100.29
38. MCO 5100.8
39. MCO 5104.3
40. MCO 5215.1
41. MCO 5215.17
42. MCO 5500.6
43. MCO 5530.14
44. MCO 8300.1
45. MCO 8400.6
46. MCO P11240.106
47. MCO P11262.2
48. MCO P1200.7
49. MCO P4400.105
50. MCO P4400.150
51. MCO P4600.14
52. MCO P4600.19
53. MCO P4610.19
54. MCO P4790.1
55. MCO P4790.2
56. MCO P4790.3
57. MCO P5090.2
58. MCO P5600.31
59. MCRP 3-OA
60. MCRP 3-OB
61. MCWP 3-1
62. MCWP 4-1
63. MSE/Unit embarkation
64. NAVFAC P307
65. NAVSEATM 50420-AA-RAD-010
66. OPNAVINST 5530.13
67. OPNAVINST 5530.14
68. SECNAVINST 5216.5
69. SL 1-2/Sl 1-3
70. Table of Organization & Equipment (T/O&E)
71. TB MED 524
72. TI 4733-15/1
73. TI 4733-15/11
74. TM 4700-15/1
75. TM 4795-12
76. TM 4795-34
77. UM 4400-124
78. UM 4790-5
79. UM-MCPDS
80. UM-PLMS

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2002: Employ ground ordnance equipment maintenance management programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, and applicable references.

Standard: Ensure all applicable maintenance management programs are established per the references.

Performance Steps:

1. Validate mission requirements.
2. Analyze capabilities.
3. Validate resource requirements.
4. Analyze external requirements.
5. Anticipate future maintenance requirements.
6. Develop procedures utilizing functional areas of maintenance management.
7. Implement maintenance management programs.
8. Manage maintenance management programs.

References:

1. MCO P4790.2
2. MCO P1200.7
3. MCO 3000.11
4. TM 4700-15/1
5. Applicable Technical Information
6. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2003: Manage ground ordnance equipment maintenance resources

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, personnel, maintenance facility, and a budget.

Standard: Ensure maintenance resources are focused on ordnance equipment readiness and are maintained in accordance with the references and commanders intent.

Performance Steps:

1. Determine required resources.
2. Prioritize available resources.
3. Plan employment of available resources.
4. Organize available resources.
5. Coordinate available resources.

References:

1. MCO P4790.2
2. Table of Organization & Equipment (T/O&E)
3. TM 4700-15/1
4. MCO 4400.150

5. MCWP 4-1
6. MCDP 4
7. MCO 4733.1
8. MCO 4710.8
9. MCO 5215.1
10. MCO 5215.17
11. MCO P5600.31
12. MCO P4400.82
13. MCO 3000.11
14. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2004: Manage technical information and directives for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, mission requirements, and references.

Standard: Ensure the quantity, serviceability, and accountability of all information sources is maintained per the references.

Performance Steps:

1. Validate requirements.
2. Register requirements.
3. Manage the publications control program.

References:

1. MCO P4790.2
2. MCO P5215.1
3. MCO 5600.31
4. Table of Organization & Equipment (T/O&E)
5. UM-PLMS
6. SL 1-2/Sl 1-3
7. UM-MCPDS

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2005: Monitor maintenance shop level MOS training program

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, personnel records, and mission requirements.

Standard: Ensure personnel are trained per the references.

Performance Steps:

1. Validate requirements.
2. Coordinate MOS training.
3. Direct MOS training.
4. Analyze MOS training effectiveness.

References:

1. MCO 1510 Series
2. MCO P4790.2
3. MCO 1553.3
4. MCO 1553.2
5. MCRP 3-OA
6. MCRP 3-OB
7. MCWP 4-1
8. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2006: Manage support equipment programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, equipment records, and references.

Standard: Ensure support equipment and maintenance programs are implemented per applicable references.

Performance Steps:

1. Validate requirements.
2. Ensure control procedures are established.
3. Ensure Preventive Maintenance Checks and Services (PMCS) is conducted.
4. Ensure corrective maintenance is conducted.
5. Analyze effectiveness of support program.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. MCO 4733.1
4. MCO P4790.2
5. TI 4733-15/1
6. TI 4733-15/11
7. Current MARADMINs
8. Applicable Technical Information
9. Table of Organization & Equipment (T/O&E)
10. Local Policies and Procedures

Administrative Instructions: The term support equipment includes but is not limited to tool sets, kits, chests, hoists, jacks, stands, and TMDE (calibration equipment). See Administrative Notes, para 9020.

2125-ADMN-2007: Manage supply support procedures for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, unit budget, mission requirements, and references.

Standard: Ensure all supply procedures are accomplished per the mission requirements and references.

Performance Steps:

1. Validate supply support requirements.
2. Coordinate requisition procedures.
3. Direct the accountability of all repair parts.
4. Direct validation procedures.
5. Direct reconciliation procedures.
6. Coordinate with internal supply support agencies.
7. Coordinate with external supply support agencies.
8. Validate budget requirements.

References:

1. MCO P4400.82
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 8300.1
5. MCO 4340.1
6. MCO P4400.150
7. MCO 4400.16
8. UM 4400-124
9. Local Policies and Procedures
10. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2008: Manage ground ordnance maintenance facilities

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given a Table of Organization & Equipment (T/O&E), automated systems with internet access, maintenance facilities, mission requirements and references.

Standard: Ensure maintenance facilities are established per the mission requirements and references.

Performance Steps:

1. Validate requirements.
2. Validate maintenance flow plan.
3. Validate facilities to support mission.
4. Validate operational risk management procedures.
5. Prioritize use of facilities.
6. Ensure facilities are maintained.

References:

1. MCO P4790.1
2. MCO P4790.2
3. Applicable Technical Information
4. MCO P11262.2
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2009: Manage maintenance production schedule for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, Table of Organization & Equipment (T/O&E), automated systems with internet access, automated reports, equipment records, and maintenance resources.

Standard: Ensure maintenance production flow is accomplished per the mission requirements, resources, and references.

Performance Steps:

1. Validate production capability.
2. Prioritize maintenance effort.
3. Validate available resources.
4. Analyze quality control effectiveness.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCBUL 3000
5. Table of Organization & Equipment (T/O&E)
6. Applicable Technical Information
7. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2010: Manage maintenance related programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure maintenance related programs are employed per the mission requirements and references.

Performance Steps:

1. Validate mission requirements.
2. Manage Product Quality Deficiency Report (PQDR) program.
3. Manage Corrosion Prevention and Control (CPAC) program.
4. Manage a Quality Control (QC) program.
5. Manage unit level execution of Depot Level Maintenance programs.
6. Manage execution of Contract Logistic Support (CLS).
7. Manage execution of warranty programs.
8. Manage demilitarization procedures.
9. Manage Military Awards/Incentives Program.

References:

1. MCO P4790.2
2. MCO 4733.1
3. MCO 4855.10
4. MCO P4790.1
5. MCO 4105.2
6. MCO 1650.17
7. MCO P4790.3
8. MCO 3000.11
9. MCO 4790.18
10. MCBUL 3000
11. TM 4795-12
12. TM 4795-34
13. TM 4750-15/1
14. DOD 4160.21-M-1
15. Applicable Unit Logistics Support Summary (ULSS)
16. Applicable Technical Information
17. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2011: Manage preventive maintenance checks and services (PMCS) programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure preventive maintenance checks and services are accomplished per the mission requirements and references.

Performance Steps:

1. Validate PMCS requirements.
2. Validate cyclic maintenance requirements.
3. Validate special maintenance requirements.
4. Validate deferred maintenance requirements.
5. Validate PMCS schedule.
6. Manage documentation of PMCS program.
7. Manage Quality Control (QC) procedures for PMCS program.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCBUL 3000
5. MCO 4400.16
6. TM 4700-15/1
7. Applicable Technical Information
8. Local policies and procedures
9. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2012: Manage corrective maintenance program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure corrective maintenance is accomplished per the mission requirements and references.

Performance Steps:

1. Validate corrective maintenance requirements.
2. Monitor applicable maintenance procedures.
3. Monitor applicable reporting procedures.
4. Analyze quality control effectiveness.
5. Coordinate with external maintenance activities.

References:

1. MCO P4790.1
2. MCO P4790.2
3. MCO 3000.11
4. MCO 4400.16
5. MCO 4400.82

6. MCO 4400.150
7. MCBUL 3000
8. TM 4700-15/1
9. Local Policies and Procedures
10. Applicable Technical Information
11. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2013: Manage modification programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment modifications are accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment requiring modification.
2. Monitor modification program.
3. Verify completion of administrative requirements.
4. Analyze modification program effectiveness.

References:

1. MCO P4790.2
2. MCO P4790.1
3. Table of Organization & Equipment (T/O&E)
4. TM 4700-15/1
5. Applicable MI's

Administrative Instructions: See Administrative Notes, para 9020.

2120-ADMN-2014: Monitor environmental compliance for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: To ensure that environmental compliance procedures are observed per the mission requirements and references.

Performance Steps:

1. Validate environmental compliance requirements.

2. Coordinate with unit environmental compliance representative.
3. Direct corrective actions.
4. Analyze effectiveness of program.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P5090.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. MCO 4450.12
9. TB MED 524
10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current MARADMINs
13. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of environment compliance encompasses but is not limited to the following areas of concern: radiation safety, Hazardous Material (HAZMAT) handling procedures, Depleted Uranium (DU) hazards, Nuclear Regulatory Commission (NRC) Licenses, and Material Safety Data Sheets (MSDS). See Administrative Notes, para 9020.

2125-ADMN-2015: Manage shop safety program

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure shop safety practices are observed per the mission requirements and references.

Performance Steps:

1. Validate safety program requirements.
2. Supervise compliance with shop safety procedures.
3. Direct corrective actions.
4. Analyze effectiveness of program.

References:

1. 0929 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P50.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. MCO 4450.12
9. TB MED 524

10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current MARADMINs
13. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of safety encompasses all aspects of ground safety, which includes but is not limited to the following areas of concern: radiation safety, laser safety, Occupational Safety & Health Administration (OSHA) regulations & policies, Material Safety Data Sheets (MSDS), battery rooms, Personal Protective Equipment (PPE), heat conditions, fire protection, medical surveillance programs, and industrial hygiene. See Administrative Notes, para 9020.

2125-ADMN-2016: Manage embarkation program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment is embarked per the mission requirements and references.

Performance Steps:

1. Validate embarkation requirements.
2. Ensure that requirements are documented.
3. Coordinate with embarkation personnel.
4. Manage the preparation of equipment for embark.

References:

1. MSE/Unit embarkation
2. Table of Organization & Equipment (T/O&E)
3. MCO 4030.16
4. MCO 4030.19
5. MCO 4030.25
6. MCO 4030.33
7. MCO 4030.36
8. MCO 4110.2
9. MCO 4400.16
10. MCO P4400.150
11. MCO P4600.14
12. MCO P4600.19
13. MCO 4600.25
14. MCO 4600.30
15. MCO 4610.15
16. MCO P4610.19

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2017: Manage maintenance shop information requirements

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment information is completed per the mission requirements and references.

Performance Steps:

1. Validate maintenance information requirements.
2. Validate required output reports.
3. Manage completion of maintenance resource reports.
4. Analyze performance indicators of reports.
5. Conduct trend analysis of reports.
6. Direct corrective action.
7. Review message traffic for information concerning ground ordnance equipment.

References:

1. MCO P4790.2
2. Current ALMARS
3. Current MARADMINs
4. Applicable Technical Information
5. Local Policies and Procedures
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/ Automated Information Systems, MIMMS (AIS), Asset Tracking Logistics, Supply System II+ (ATLASS II+), and Defense Message System (DMS). See Administrative Notes, para 9020.

2125-ADMN-2018: Prepare routine correspondence, messages, staff papers, and policy letters for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, and the information required to be published.

Standard: Ensure routine correspondence, messages, staff papers, and policy letters are completed per the mission requirements and references.

Performance Steps:

1. Prepare correspondence, as required.

2. Prepare messages, as required.
3. Prepare reports, as required.
4. Prepare staff papers, as required.
5. Prepare policy letters, as required.
6. Review all correspondence submitted by subordinates.
7. Direct correspondence filing procedures.
8. Staff correspondence to higher and adjacent agencies.

References:

1. MCO P1070.12
2. SECNAVINST 5216.5
3. MCWP 3-1
4. Local policies and procedures
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2019: Manage physical security programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, equipment records, and ground ordnance equipment storage facilities.

Standard: Ensure ground ordnance equipment is safeguarded from theft/tampering per the mission requirements and references.

Performance Steps:

1. Validate security requirements.
2. Analyze the established security procedures for adequacy.
3. Validate compliance of security requirements for facilities.
4. Ensure personnel are security trained.
5. Conduct AA&E personnel screenings.
6. Analyze effectiveness of security programs.

References:

1. MCO 5530.14
2. OPNAVINST 5530.13
3. OPNAVINST 5530.14
4. MCO 5500.6
5. MCO P4400.150
6. MCO 8300.1
7. Current ALMARs
8. Current MARADMINs
9. Applicable Technical Information
10. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

2125-ADMN-2020: Assist in the fielding of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure the equipment fielding is supported and accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment fielding requirements.
2. Review fielding documents.
3. Assist in fielding plan.
4. Coordinate placement of equipment into service.
5. Coordinate staff functions to determine priority of fielding.
6. Monitor completion of administrative functions.

References:

1. MCO P4790.2
2. Applicable Technical Information
3. Applicable Unit Logistics Support Summary (ULSS)
4. MCO 4420.15
5. MCO 8300.1
6. MCO P4400.82
7. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 9020.

FUNCTIONAL AREA: TECHNICAL FUNCTIONS

2125-TECH-2031: Serve as the technical advisor for electro-optical ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Provided with guidance and command philosophy from the Commanding Officer and his staff in accordance with the applicable references.

Standard: Ensure unit readiness is sustained at an acceptable level and provide recommendations to the Commanding Officer regarding operations and maintenance of electro-optical ordnance equipment.

Performance Steps:

1. Prepare information on all matters relating to electro-optical ordnance equipment.
2. Provide guidance on all matters relating to electro-optical ordnance equipment.
3. Provide recommendations on all matters relating to electro-optical ordnance equipment.
4. Conduct internal reviews.

References:

1. 29 CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARS
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP-4
11. MCO 1510 Series
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82
27. MCO 4420.15
28. MCO 4450.12

29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15
32. MCO 4710.8
33. MCO 4733.1
34. MCO 4790.18
35. MCO 4790.2
36. MCO 4855.10
37. MCO 5100.29
38. MCO 5100.8
39. MCO 5104.3
40. MCO 5215.1
41. MCO 5215.17
42. MCO 5500.6
43. MCO 5530.14
44. MCO 8300.1
45. MCO 8400.6
46. MCO P11240.106
47. MCO P11262.2
48. MCO P1200.7
49. MCO P4400.105
50. MCO P4400.150
51. MCO P4600.14
52. MCO P4600.19
53. MCO P4610.19
54. MCO P4790.1
55. MCO P4790.2
56. MCO P4790.3
57. MCO P5090.2
58. MCO P5600.31
59. MCRP 3-OA
60. MCRP 3-OB
61. MCWP 3-1
62. MCWP 4-1
63. MSE/Unit Embarkation
64. NAVFAC P307
65. NAVSEATM 50420-AA-RAD-010
66. OPNAVINST 5530.13
67. OPNAVINST 5530.14
68. SECNAVINST 5216.5
69. SL 1-2/Sl 1-3
70. Table of Organization & Equipment (T/O&E)
71. TB MED 524
72. TI 4733-15/1
73. TI 4733-15/11
74. TM 4700-15/1
75. TM 4795-12
76. TM 4795-34
77. UM 4400-124
78. UM 4790-5
79. UM-MCPDS
80. UM-PLMS

Administrative Instructions: Ground ordnance weapons include small arms weapons, ground ordnance Electro-Optical equipment, and artillery. See Administrative Notes, para 9020.

2125-TECH-2032: Provide technical management for the repair of electro-optical ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), personnel, personnel records, equipment, equipment records, and maintenance facilities.

Standard: Ensure maintenance of electro-optical ordnance equipment is accomplished per the mission requirements and references.

Performance Steps:

1. Validate requirements.
2. Validate deficiencies.
3. Validate maintenance solutions.
4. Direct maintenance effort.
5. Direct maintenance personnel.
6. Ensure safety of personnel.
7. Analyze effectiveness of administrative functions.
8. Advise command on matters pertaining to electro-optical equipment.
9. Direct compliance of radiological safety.
10. Direct compliance of LASER safety.
11. Provide technical expertise in the acquisition of electro-optical ordnance equipment.

References:

1. 29 CFR 1910.12000
2. Applicable MI's
3. Applicable Technical Information
4. Applicable Unit Logistics Support Summary (ULSS)
5. Current ALMARs
6. Current MARADMINs
7. DOD 4160.21-M-1
8. Local Policies and Procedures
9. MCBUL 3000
10. MCDP 4
11. MCO 1510 Series
12. MCO 1553.2
13. MCO 1553.3
14. MCO 1650.17
15. MCO 3000.11
16. MCO 4030.16
17. MCO 4030.19
18. MCO 4030.25
19. MCO 4030.33
20. MCO 4030.36
21. MCO 4105.2
22. MCO 4110.2
23. MCO 4340.1
24. MCO 4400.150
25. MCO 4400.16
26. MCO P4400.82

27. MCO 4420.15
28. MCO 4450.12
29. MCO 4600.25
30. MCO 4600.30
31. MCO 4610.15
32. MCO 4710.8
33. MCO 4733.1
34. MCO 4790.18
35. MCO 4790.2
36. MCO 4855.10
37. MCO 5100.29
38. MCO 5100.8
39. MCO 5104.3
40. MCO 5215.1
41. MCO 5215.17
42. MCO 5500.6
43. MCO 5530.14
44. MCO 8300.1
45. MCO 8400.6
46. MCO P11240.106
47. MCO P11262.2
48. MCO P1200.7
49. MCO P4400.105
50. MCO P4400.150
51. MCO P4600.14
52. MCO P4600.19
53. MCO P4610.19
54. MCO P4790.1
55. MCO P4790.2
56. MCO P4790.3
57. MCO P5090.2
58. MCO P5600.31
59. MCRP 3-OA
60. MCRP 3-OB
61. MCWP 3-1
62. MCWP 4-1
63. MSE/Unit Embarkation
64. NAVFAC P307
65. NAVSEATM 50420-AA-RAD-010
66. OPNAVINST 5530.13
67. OPNAVINST 5530.14
68. SECNAVINST 5216.5
69. SL 1-2/Sl 1-3
70. Table of Organization & Equipment (T/O&E)
71. TB MED 524
72. TI 4733-15/1
73. TI 4733-15/11
74. TM 4700-15/1
75. TM 4795-12
76. TM 4795-34
77. UM 4400-124
78. UM 4790-5
79. UM-MCPDS
80. UM-PLMS

Administrative Instructions: See Administrative Notes, para 9020.

2125-TECH-2033: Manage unit ammunition control program

Initial Training Setting: FS

Sustainment Interval: 24

Grade: WO1, CWO2, CWO3, CWO4, CWO5

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), ammunition records, ammunition, and personnel.

Standard: Ensure mission requirements are sustained per the references.

Performance Steps:

1. Validate ammunition requirements.
2. Register ammunition requirements.
3. Ensure safety of personnel.
4. Ensure ammunition handling procedures are adhered to.
5. Ensure ammunition accountability is adhered to.
6. Ensure completion of administrative functions.
7. Monitor explosive drivers certification.

References:

1. MCO 1510.78
2. MCO 4340.1
3. MCO 8010.1
4. MCO 8020.10
5. MCO 8025.1
6. MCBul 8011
7. UM 4400-15
8. NAVSEA SW020-AC-SAF-010
9. NAVSEA SW020-AF-ABK-010
10. NAVSEA TWO24-AA-ORD-010

Administrative Instructions: See Administrative Notes, para 9020.

CHAPTER 10

MOS 2131, TOWED ARTILLERY SYSTEMS REPAIRER INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	10000	10-1
EVENT CODING.....	10010	10-1
ADMINISTRATIVE NOTES.....	10020	10-1
INDEX OF INDIVIDUAL EVENTS.....	10030	10-2
1000 LEVEL INDIVIDUAL EVENTS.....	10040	10-3

MOS 2131, TOWED ARTILLERY SYSTEMS REPAIRER INDIVIDUAL TRAINING

10000. PURPOSE

This chapter contains individual training events for the Towed Artillery Systems Repairer.

10010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2131, indicating that the event is for MOS 2131, Towed Artillery Systems Repairer.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Organizational Maintenance	ORGM	2131-ORGM-xxxx
Administrative Functions	ADMN	2131-ADMN-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains only 1000-level events.

10020. ADMINISTRATIVE NOTES

1. Maintenance and/or repairs are limited to authorized echelon of maintenance.

2. Hazardous material use that may render exposure is limited to personnel who have been provided information and training prior to initial assignment to work with a hazardous chemical, who have reviewed hazardous materials material safety data sheets for personal protective equipment and special precautions while working with chemicals, and who take precautions to avoid exposure to other employees.

3. Automated systems include CD-ROM, web based information and all applicable electronic media.

10030. INDEX OF INDIVIDUAL EVENTS

Event Code	Event	Page
	ORGANIZATIONAL MAINTENANCE	
2131-ORGM-1001	Maintain M198 155MM Howitzer tools	10-3
2131-ORGM-1002	Perform M198 155MM Howitzer PMCS	10-3
2131-ORGM-1003	Maintain M198 Howitzer collateral equipment	10-4
2131-ORGM-1004	Repair M199 cannon tube assembly	10-5
2131-ORGM-1005	Repair M45 recoil mechanism	10-5
2131-ORGM-1006	Repair M39 carriage	10-6
	ADMINISTRATIVE FUNCTIONS	
2131-ADMN-1011	Maintain shop tools	10-7
2131-ADMN-1012	Validate equipment serviceability	10-7
2131-ADMN-1013	Maintain artillery functional areas	10-8
2131-ADMN-1014	Maintain maintenance transaction reports	10-9
2131-ADMN-1015	Maintain artillery publication and directives program	10-9

10040. 1000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: ORGANIZATIONAL MAINTENANCE

2131-ORGM-1001: Maintain M198 155MM Howitzer tools

Initial Training Setting: FS

Sustainment Interval: 36

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given tools, test equipment, cleaning materials, access to automated systems with internet access, software, and references in a garrison or field environment.

Standard: Ensure tools are serviceable per the references.

Performance Steps:

1. Maintain common tools.
2. Maintain special tools.
3. Conduct tool inventories using applicable SL-3.
4. Complete maintenance/administrative forms and records.

References:

1. Applicable SL-3
2. LO 9-1025-211-13
3. SC 4931-95-CL-J54
4. TM 00640A-13&P/1 MS
5. TM 00999-23&P/1
6. TM 08552A-13&P
7. TM 9-1025-211-20&P
8. TM 9-1025-211-34
9. TM 9-1025-211-34P
10. TM 9-4933-201-15P
11. TM 9-243

Administrative Instructions: See Administrative Notes, para 10020.

2131-ORGM-1002: Perform M198 155MM Howitzer PMCS

Initial Training Setting: FS

Sustainment Interval: 24

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a howitzer, assigned tools, access to automated systems with software and the references in a garrison or field environment.

Standard: Ensure howitzer is fully operational per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).

2. Perform organizational PMCS.
3. Perform annual PMCS.
4. Perform special PMCS.
5. Perform corrosion control.
6. Complete maintenance/administrative forms and records.

References:

1. LO 9-1025-211-13
2. MCO P4790.2
3. MCO P5090.2
4. TM 4700-15/1
5. TM 9-1025-211-20&P
6. TM 9-1025-211-34
7. TM 9-1025-211-10

Administrative Instructions: See Administrative Notes, para 10020.

2131-ORGM-1003: Maintain M198 Howitzer collateral equipment

Initial Training Setting: FS

Sustainment Interval: 18

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a howitzer, assigned tools, test equipment, access to automated systems with software, and references in a garrison or field environment.

Standard: Ensure all required maintenance is identified and make repairs to the authorized echelon of maintenance utilizing the references.

Performance Steps:

1. Inspect equipment for serviceability.
2. Perform fault isolation procedures.
3. Repair components.
4. Replace components.
5. Complete maintenance/administrative forms and records.

References:

1. TM 9-1025-211-20&P
2. TM 11-7440-283-12-2
3. TM 9-1025-211-10
4. TM 9-1025-211-34
5. TM 9-1025-211-34P

Administrative Instructions:

Collateral equipment includes but is not limited to the chronograph, gun data display unit (GDU), M1 series collimator, M1 series gunners quadrant, M2 series aiming circle, and the vehicle tail light. See Administrative Notes #1 and #3, para 10020.

2131-ORGM-1004: Repair M199 cannon tub assembly

Initial Training Setting: FS

Sustainment Interval: 18

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M199 cannon tube, tools, equipment, access to automated systems with software, and references in a garrison or field environment.

Standard: Ensure all required maintenance is identified and make repairs to the authorized echelon of maintenance utilizing the applicable references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform fault isolation procedures.
3. Repair components.
4. Replace components.
5. Complete maintenance/administrative forms and records.

References:

1. LO 9-1025-211-13
2. MCO P5090.2
3. TM 9-1025-211-20&P
4. TM 9-1025-211-34
5. TM 9-1025-211-34P
6. TM 9-1025-211-10

Administrative Instructions: See Administrative Notes, para 10020.

2131-ORGM-1005: Repair M45 recoil mechanism

Initial Training Setting: FS

Sustainment Interval: 18

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M45 recoil mechanism, assigned tools, other applicable equipment, access to automated systems with internet access with software, and applicable references in a garrison or field environment.

Standard: Ensure all required maintenance is identified and repairs are completed to the authorized echelon of maintenance utilizing the applicable references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform fault isolation procedures.
3. Repair or replace components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LO 9-1025-211-13

2. MCO P5090.2
3. TM 9-1025-211-20&P
4. TM 9-1025-211-34
5. TM 9-1025-211-34P
6. TM 9-1025-211-10

Administrative Instructions: See Administrative Notes, para 10020.

2131-ORGM-1006: Repair M39 carriage

Initial Training Setting: FS

Sustainment Interval: 18

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M39 carriage assembly, assigned tools, test equipment, access to automated systems with internet access, applicable software and references in a garrison or field environment.

Standard: Ensure all required maintenance is identified and repairs are completed to the authorized echelon of maintenance utilizing the applicable references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform fault isolation procedures.
3. Repair or replace components.
4. Perform fire control alignment test and optical PM/CM.
5. Complete maintenance and/or administrative forms and records.

References:

1. LO 9-1025-211-13
2. MCO P5090.2
3. TM 9-1025-211-20&P
4. TM 9-1025-211-34
5. TM 9-1025-211-34P
6. TM 11-7440-283-12-2
7. TM 9-1025-211-10

Administrative Instructions:

1. See Administrative Notes, para 10020.
 2. M39 carriage assembly includes but is not limited to the elevation mechanism, traversing mechanism, hydraulic system, wheel assembly, brake system, trails, equilibrators, Hypac system, manifold assembly, and cradle assembly.
-

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2131-ADMN-1011: Maintain shop tools

Initial Training Setting: FS

Sustainment Interval: 6

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given common tools, power tools, precision measuring tools, and the references.

Standard: Maintain serviceability of tools per the references.

Performance Steps:

1. Organize tools and equipment within work area.
2. Follow instructions for care of tools.
3. Observe safety regulations.
4. Observe hazardous material regulations.

References:

1. Material safety data sheets for hazardous materials
2. 29 CFR 1910.1200
3. DOD INST 6050.5
4. Dod Inst 6055.11
5. FM 9-243
6. MCO P5090.2
7. TM 10209-10/1
8. TM 9-254
9. U.S. ARMY TB 43-0134, Battery Disposition and Disposal

Administrative Instructions: To comply with 29 CFR 1910.1200 (Hazard Communication), employees who may be exposed to a hazardous material must (1) have been provided information and training prior to their initial assignment to work with the hazardous chemical and whenever the hazard changes; and (2) have access to label information and material safety data sheets to understand the hazard(s), and (3) to identify the necessary personal protective equipment and special precautions to use while working with the chemical.

2131-ADMN-1012: Validate equipment serviceability

Initial Training Setting: FS

Sustainment Interval: 6

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given equipment repair records/forms and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Utilize required publications and directives.
2. Adhere to modification instructions.
3. Adhere to calibration procedures.
4. Complete maintenance management forms needed to document work.

References:

1. MCO 4790.2
2. TM 4700-15/1
3. UM 4790-5
4. UM 4400-124
5. MCO P5215.17
6. NAVMC 2761
7. SL-1-2 and 1-3
8. TI-4733-15/1

Current MCI(s):

1. MCI 04.10, MIMMS-AIS (Marine Corps Integrated Maintenance Management System)

2131-ADMN-1013: Maintain artillery functional areas

Initial Training Setting: FS

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given artillery functional areas, current technical information, and automated systems with internet access in a field or garrison environment.

Standard: Ensure the functional areas are maintained per the references.

Performance Steps:

1. Maintain calibrations control program.
2. Maintain tool control program.
3. Maintain desktop/turnover procedures.
4. Maintain modification control program.
5. Maintain preventive maintenance program.
6. Maintain corrective maintenance program.
7. Maintain quality control program.
8. Maintain training program.
9. Maintain embark program.
10. Apply artillery operational risk management (ORM).

References:

1. MCO 1510.65B
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 4733.1
5. MCO P4400.150
6. TI 4733-15/1
7. TI 4733-15/11
8. TI 8000 Series

9. Applicable MI's
10. Current MARADMINs
11. Applicable Technical Information
12. MCO 4400.16
13. UM 4790-5

Administrative Instructions: Maintenance and/or repair limited authorized echelon of maintenance. Automated systems include CD-ROM, and web based information.

2131-ADMN-1014: Maintain maintenance transaction reports

Initial Training Setting: FS

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given current technical information and automated systems with internet access in a field or garrison environment.

Standard: Ensure all armory maintenance transactions reports are updated per the references.

Performance Steps:

1. Analyze DPR.
2. Verify transactions on the DTL.
3. Verify exception reports.
4. Verify LM2 report.
5. Verify TAM report.
6. Submit maintenance transactions.
7. Conduct required reconciliation's.

References:

1. MCO 4400.16
2. MCO P4790.2
3. TM 4700-15/1
4. UM 4790-5
5. Local Policies and Procedures

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/ Automated Information Systems (MIMMS/AIS), Asset Tracking Logistics and Supply System II+ (ATLASS II+). Automated systems include CD-ROM, and web based information.

2131-ADMN-1015: Maintain artillery publications and directives program

Initial Training Setting: FS

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given current technical information and automated systems with internet access in a field or garrison environment.

Standard: Ensure the required publications and directives are on hand to accomplish mission.

Performance Steps:

1. Maintain publications requirements based on mission and T/E.
2. Maintain publications and directives on hand.
3. Determine deficiencies.
4. Take corrective actions as required.
5. Maintain armory publication and directives control procedures.

References:

1. MCO P4790.2
2. MCO P5215.17
3. MCO P5600.31
4. NAVMC 2761
5. SL-1-2
6. SL-1-3
7. TI 5600
8. TM 4700-15/1
9. UM-PLMS
10. MCO P5215.1

Administrative Instructions: Maintenance and/or repairs limited to authorized echelon of maintenance. Automated systems include CD-ROM, web based information, and all applications of electronic media.

CHAPTER 11

MOS 2141, ASSAULT AMPHIBIOUS VEHICLE REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	11000	11-1
EVENT CODING.....	11010	11-1
ADMINISTRATIVE NOTES.....	11020	11-1
INDEX OF INDIVIDUAL EVENTS BY LEVEL.....	11030	11-2
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	11040	11-4
1000 LEVEL INDIVIDUAL EVENTS.....	11050	11-6
2000 LEVEL INDIVIDUAL EVENTS.....	11060	11-18

MOS 2141, ASSAULT AMPHIBIOUS VEHICLE REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

11000. PURPOSE

This chapter contains individual training events for the Assault Amphibious Vehicle Repairer/Technician.

11010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2141, indicating that the event is for MOS 2141, Assault Amphibious Vehicle Repairer/Technician.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Crew/Operator Maintenance	CWOP	2141-CWOP-xxxx
Organizational Maintenance	ORGM	2141-ORGM-xxxx
Intermediate Maintenance	INTM	2141-INTM-xxxx
Administrative Functions	ADMN	2141-ADMN-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains events in both levels.

11020. ADMINISTRATIVE NOTES

1. Maintenance and/or repairs are limited to authorized echelon of maintenance.
2. Material Safety Data Sheet (MSDS) must be on hand for all POLs, paint, and other hazardous materials used in preventive/corrective maintenance.

11030. INDEX OF 2141 INDIVIDUAL EVENTS BY LEVEL

Event Code	Event	Page
	1000-LEVEL	
2141-CWOP-1001	Perform AAV/FOV operator PMCS	11-6
2141-CWOP-1002	Perform AAV/FOV operator maintenance	11-6
2141-CWOP-1003	Operate AAV	11-7
2141-CWOP-1004	Maintain AAV/FOV equipment records	11-7
2141-CWOP-1005	Operate AAV/FOV communications equipment	11-8
2141-CWOP-1006	Operate AAVR7A1 recovery equipment	11-8
2141-CWOP-1007	Operate AAVR7A1 maintenance equipment	11-9
2141-CWOP-1008	Perform land-based recovery with the AAV/FOV	11-9
2141-ORGM-1021	Perform AAV/FOV organizational-level PMCS	11-10
2141-ORGM-1022	Maintain AAV/FOV suspension system	11-10
2141-ORGM-1023	Maintain AAV/FOV power plant	11-11
2141-ORGM-1024	Maintain AAV/FOV transmission	11-11
2141-ORGM-1025	Maintain AAV/FOV engine	11-12
2141-ORGM-1026	Maintain AAV/FOV cooling tower assembly	11-12
2141-ORGM-1027	Maintain AAV/FOV final drives	11-13
2141-ORGM-1028	Maintain AAV/FOV hydraulic system	11-13
2141-ORGM-1029	Maintain AAV/FOV electrical system	11-14
2141-ORGM-1030	Maintain AAV/FOV fuel system	11-14
2141-ORGM-1031	Maintain AAV/FOV controls and linkages	11-15
2141-ORGM-1032	Maintain AAV/FOV fire suppression system	11-15
2141-ORGM-1033	Maintain AAV/FOV ventilation system	11-16
2141-ORGM-1034	Maintain AAVR7/FOV unique equipment	11-16
2141-ORGM-1035	Maintain AAV/FOV upgunned weapon station (UGWS)	11-17
	2000-LEVEL	
2141-CWOP-2001	Operate AAVP7A1 cold weather equipment	11-18
2141-CWOP-2002	Maintain AAVR7A1 tools and test equipment	11-18
2141-ORGM-2021	Maintain AAV/FOV cold weather equipment	11-19
2141-ORGM-2022	Maintain AAV/FOV air aspiration system	11-19
2141-ORGM-2023	Maintain AAV/FOV water propulsion system	11-20
2141-ORGM-2024	Recover submerged AAV/FOV	11-20
2141-ORGM-2025	Prepare AAV/FOV for shipment	11-20
2141-ORGM-2026	Maintain stored AAV/FOV	11-21
2141-ORGM-2027	Perform an AAV/FOV modification	11-21
2141-ORGM-2028	Perform quality control inspection	11-22
2141-INTM-2041	Maintain AAV/FOV cold weather equipment	11-23
2141-INTM-2042	Maintain AAV/FOV transmission	11-23
2141-INTM-2043	Maintain AAV/FOV engine	11-24
2141-INTM-2044	Maintain AAV/FOV cooling tower assembly	11-24
2141-INTM-2045	Maintain AAV/FOV final drive	11-25
2141-INTM-2046	Maintain AAV/FOV water propulsion system	11-25
2141-INTM-2047	Maintain AAV/FOV hydraulic system	11-26
2141-INTM-2048	Maintain AAV/FOV electrical system	11-26
2141-INTM-2049	Maintain AAV/FOV fire suppression system	11-27
2141-INTM-2050	Maintain AAV/FOV upgunned weapon station (UGWS)	11-27
2141-INTM-2051	Maintain AAVR7/FOV unique equipment	11-28

2141-INTM-2052	Maintain AAV/FOV track tension adjuster	11-28
2141-INTM-2053	Repair hydraulic cylinder	11-29
2141-INTM-2054	Repair bow plan actuator	11-29
2141-INTM-2055	Repair transmission assembly	11-30
2141-INTM-2056	Repair speed change assembly	11-30
2141-INTM-2057	Repair AAV/FOV clutch pack assemblies	11-31
2141-INTM-2058	Repair brake and steer assembly	11-31
2141-INTM-2059	Repair range selector valve assembly	11-32
2141-INTM-2060	Repair power take-off assembly	11-32
2141-INTM-2061	Repair marine drive friction clutch	11-33
2141-INTM-2062	Repair fan drive friction clutch	11-33
2141-INTM-2063	Repair power driven rotary pump	11-34
2141-INTM-2064	Repair solenoid valve assembly	11-34
2141-INTM-2065	Repair personnel heater	11-34
2141-INTM-2066	Repair AAV/FOV engine	11-35
2141-INTM-2067	Repair AAV/7A1 VT525 turbocharger	11-35
2141-INTM-2068	Repair water pump	11-36
2141-INTM-2069	Repair AAV/FOV cylinder heads	11-36
2141-INTM-2070	Repair AAV/FOV final drive assembly	11-37
2141-INTM-2071	Repair hydraulic bilge pump	11-37
2141-INTM-2072	Repair AAV/FOV upgunned weapon station (UGWS)	11-38
2141-INTM-2073	Repair water just propulsion unit	11-38
2141-INTM-2074	Repair deflector actuator assembly	11-39
2141-INTM-2075	Repair crew vent fan	11-39
2141-INTM-2076	Repair radiator	11-40
2141-INTM-2077	Repair elevation mechanism	11-40
2141-INTM-2078	Repair power-assisted traverse mechanism	11-41
2141-INTM-2079	Maintain AAV/FOV MK154 launcher	11-41
2141-ADMN-2091	Manage maintenance functional areas	11-43
2141-ADMN-2092	Administer maintenance management programs	11-43
2141-ADMN-2093	Perform operator training	11-44
2141-ADMN-2094	Perform MIMMS/ATLASS II+ systems administration	11-45
2141-ADMN-2095	Conduct military occupational specialty training program	11-45

11040. INDEX OF 2141 INDIVIDUAL EVENTS BY FUNCTIONAL AREA

Event Code	Event	Page
	CREW/OPERATOR MAINTENANCE	
2141-CWOP-1001	Perform AAV/FOV operator PMCS	11-6
2141-CWOP-1002	Perform AAV/FOV operator maintenance	11-6
2141-CWOP-1003	Operate AAV	11-7
2141-CWOP-1004	Maintain AAV/FOV equipment records	11-7
2141-CWOP-1005	Operate AAV/FOV communications equipment	11-8
2141-CWOP-1006	Operate AAVR7A1 recovery equipment	11-8
2141-CWOP-1007	Operate AAVR7A1 maintenance equipment	11-9
2141-CWOP-1008	Perform land-based recovery with the AAV/FOV	11-9
2141-CWOP-2001	Operate AAVP7A1 cold weather equipment	11-18
2141-CWOP-2002	Maintain AAVR7A1 tools and test equipment	11-18
	ORGANIZATIONAL MAINTENANCE	
2141-ORGM-1021	Perform AAV/FOV organizational-level PMCS	11-10
2141-ORGM-1022	Maintain AAV/FOV suspension system	11-10
2141-ORGM-1023	Maintain AAV/FOV power plant	11-11
2141-ORGM-1024	Maintain AAV/FOV transmission	11-11
2141-ORGM-1025	Maintain AAV/FOV engine	11-12
2141-ORGM-1026	Maintain AAV/FOV cooling tower assembly	11-12
2141-ORGM-1027	Maintain AAV/FOV final drives	11-13
2141-ORGM-1028	Maintain AAV/FOV hydraulic system	11-13
2141-ORGM-1029	Maintain AAV/FOV electrical system	11-14
2141-ORGM-1030	Maintain AAV/FOV fuel system	11-14
2141-ORGM-1031	Maintain AAV/FOV controls and linkages	11-15
2141-ORGM-1032	Maintain AAV/FOV fire suppression system	11-15
2141-ORGM-1033	Maintain AAV/FOV ventilation system	11-16
2141-ORGM-1034	Maintain AAVR7/FOV unique equipment	11-16
2141-ORGM-1035	Maintain AAV/FOV upgunned weapon station (UGWS)	11-17
2141-ORGM-2021	Maintain AAV/FOV cold weather equipment	11-19
2141-ORGM-2022	Maintain AAV/FOV air aspiration system	11-19
2141-ORGM-2023	Maintain AAV/FOV water propulsion system	11-20
2141-ORGM-2024	Recover submerged AAV/FOV	11-20
2141-ORGM-2025	Prepare AAV/FOV for shipment	11-20
2141-ORGM-2026	Maintain stored AAV/FOV	11-21
2141-ORGM-2027	Perform an AAV/FOV modification	11-21
2141-ORGM-2028	Perform quality control inspection	11-22
	INTERMEDIATE MAINTENANCE	
2141-INTM-2041	Maintain AAV/FOV cold weather equipment	11-23
2141-INTM-2042	Maintain AAV/FOV transmission	11-23
2141-INTM-2043	Maintain AAV/FOV engine	11-24
2141-INTM-2044	Maintain AAV/FOV cooling tower assembly	11-24
2141-INTM-2045	Maintain AAV/FOV final drive	11-25
2141-INTM-2046	Maintain AAV/FOV water propulsion system	11-25
2141-INTM-2047	Maintain AAV/FOV hydraulic system	11-26
2141-INTM-2048	Maintain AAV/FOV electrical system	11-26

2141-INTM-2049	Maintain AAV/FOV fire suppression system	11-27
2141-INTM-2050	Maintain AAV/FOV upgunned weapon station (UGWS)	11-27
2141-INTM-2051	Maintain AAVR7/FOV unique equipment	11-28
2141-INTM-2052	Maintain AAV/FOV track tension adjuster	11-28
2141-INTM-2053	Repair hydraulic cylinder	11-29
2141-INTM-2054	Repair bow plan actuator	11-29
2141-INTM-2055	Repair transmission assembly	11-30
2141-INTM-2056	Repair speed change assembly	11-30
2141-INTM-2057	Repair AAV/FOV clutch pack assemblies	11-31
2141-INTM-2058	Repair brake and steer assembly	11-31
2141-INTM-2059	Repair range selector valve assembly	11-32
2141-INTM-2060	Repair power take-off assembly	11-32
2141-INTM-2061	Repair marine drive friction clutch	11-33
2141-INTM-2062	Repair fan drive friction clutch	11-33
2141-INTM-2063	Repair power driven rotary pump	11-34
2141-INTM-2064	Repair solenoid valve assembly	11-34
2141-INTM-2065	Repair personnel heater	11-34
2141-INTM-2066	Repair AAV/FOV engine	11-35
2141-INTM-2067	Repair AAV/7A1 VT525 turbocharger	11-35
2141-INTM-2068	Repair water pump	11-36
2141-INTM-2069	Repair AAV/FOV cylinder heads	11-36
2141-INTM-2070	Repair AAV/FOV final drive assembly	11-37
2141-INTM-2071	Repair hydraulic bilge pump	11-37
2141-INTM-2072	Repair AAV/FOV upgunned weapon station (UGWS)	11-38
2141-INTM-2073	Repair water just propulsion unit	11-38
2141-INTM-2074	Repair deflector actuator assembly	11-39
2141-INTM-2075	Repair crew vent fan	11-39
2141-INTM-2076	Repair radiator	11-40
2141-INTM-2077	Repair elevation mechanism	11-40
2141-INTM-2078	Repair power-assisted traverse mechanism	11-41
2141-INTM-2079	Maintain AAV/FOV MK154 launcher	11-41
	ADMINISTRATIVE FUNCTIONS	
2141-ADMN-2091	Manage maintenance functional areas	11-43
2141-ADMN-2092	Administer maintenance management programs	11-43
2141-ADMN-2093	Perform operator training	11-44
2141-ADMN-2094	Perform MIMMS/ATLASS II+ systems administration	11-45
2141-ADMN-2095	Conduct military occupational specialty training program	11-45

11050. 1000-LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: CREW/OPERATOR MAINTENANCE

2141-CWOP-1001: Perform AAV/FOV operator PMCS

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AAV/FOV, assigned tools and equipment, access to automated system with software, and the references.

Standard: Determine operational readiness per the references.

Performance Steps:

1. Perform before operation checks and services.
2. Perform during operation checks and services.
3. Perform after operation checks and services.

References:

1. TM 07267B-10A/1A
2. TM 07268-10A/1A
3. TM 09674A-10/3A

Administrative Instructions: See Administrative Notes, para 11020.

2141-CWOP-1002: Perform AAV/FOV operator maintenance

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt, Cpl, Sgt, SSgt, GySgt

Condition: Given an AAV/FOV, assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Lubricate AAV/FOV.
2. Maintain tracks.
3. Maintain drive sprockets.
4. Maintain cooling system.
5. Maintain fuel system.
6. Maintain batteries.
7. Maintain electrical system.
8. Maintain driver's vision enhancement (DVE).
9. Maintain bilge pumps.
10. Maintain components.
11. Perform fresh water washdown of engine compartment.

12. Comply with hazardous materials handling regulations.

References:

1. TM 09674A-10/3A
2. TM 4795-12/1

Administrative Instructions: See Administrative Notes, para 11020.

2141-CWOP-1003: Operate AAV

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AAV, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Start engine.
2. Operate on land.
3. Operate in water.
4. Operate smoke generation system.
5. Operate personnel heater.
6. Operate manual fire suppression system.
7. Operate lights.
8. Operate driver's vision enhancement (DVE).
9. Operate crew ventilation system.
10. Operate hatches.
11. Operate exhaust Plenums.
12. Operate ramp.
13. Install/Remove blackout covers.
14. Operate searchlight.
15. Perform recovery operations.
16. Perform emergency procedures.
17. Operate bow plane.
18. Operate bilge pumps.
19. Operate cold start system.

References:

1. TM 09674A-10/3A
-

2141-CWOP-1004: Maintain AAV/FOV equipment records

Initial Training Setting: 12

Sustainment Interval: 36

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given AAV/FOV equipment records, access to automated system with software, and the reference.

Standard: Provide operational and maintenance history per the reference.

Performance Steps:

1. Record vehicle operation entries in logbook.
2. Record maintenance related entries in logbook.

References:

1. TM 4700-15/1
-

2141-CWOP-1005: Operate AAV/FOV communications equipment

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AAV/FOV communications equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate audio frequency amplifier AM-7162/VIC-2.
2. Operate frequency selector control C-11291.
3. Operate intercom C-11133/VIC-2.
4. Operate intercom C-111335/VIC-2.
5. Operate SINCGARS.

References:

1. TM 09674A-10/3A
 2. TM 11-5820-890-10-1
-

2141-CWOP-1006: Operate AAVR7A1 recovery equipment

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given AAVR7A1 recovery equipment, access to automated system with software, and the reference.

Standard: Support maintenance, towing, and recovery operations per the reference.

Performance Steps:

1. Perform PMCS on recovery equipment.
2. Operate hydraulic pump.
3. Operate winch.
4. Operate crane.

References:

1. TM 07267B-10A/1A

2141-CWOP-1007: Operate AAVR7A1 maintenance equipment

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given AAVR7A1 maintenance equipment, access to automated system with software, and the reference.

Standard: To support mission requirements per the reference.

Performance Steps:

1. Perform operator PMCS on maintenance equipment.
2. Operate alternating current (AC) generator.
3. Prepare welding equipment for operation.
4. Operate air compressor.
5. Operate floodlights/worklights.
6. Install/Remove ramp supports.

References:

1. TM 07267B-10A/1A
-

2141-CWOP-1008: Perform land-based recovery with the AAV/FOV

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a mired AAV7A1, an operational AAVR7A1, access to automated system with software, and the references.

Standard: To meet mission requirements per the references.

Performance Steps:

1. Survey recovery site.
2. Make recovery calculations.
3. Hook up rigging for recovery.
4. Perform recovery operations.
5. Stow rigging and associated hardware.

References:

1. TM 07267B-10A/1A
2. FMFRP-4-34

Administrative Instructions:

1. See Administrative Notes, para 11020.
 2. Ensure safety precautions for cables under stress are followed.
-

FUNCTIONAL AREA: ORGANIZATIONAL MAINTENANCE

2141-ORGM-1021: Perform AAV/FOV organizational-level PMCS

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AAV/FOV, assigned tools, access to automated system with software, and the references.

Standard: To determine operational readiness per the references.

Performance Steps:

1. Perform tune-up procedures.
2. Perform 50 hour/semiannual PMCS.
3. Perform 100 hour/annual PMCS.
4. Perform up gunned weapon station (UGWS) PMCS.
5. Perform PMCS on AAVR7A1 unique equipment.
6. Perform corrosion control procedures.

References:

1. TM 0726678-25&P/2
2. TM 07267B-10A/1A
3. TM 07267B-25&P/2
4. TM 09674A-10/3A
5. TM 09674A-25&P/4
6. TM 10004A-25&P2
7. TM 4795-12/1
8. TM 8F152B-25&PA

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1022: Maintain AAV/FOV suspension system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot suspension system.
2. Remove suspension components.
3. Inspect suspension components.

4. Repair components, as required.
5. Install suspension components.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1023: Maintain AAV/FOV power plant

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Remove power plant.
2. Repair power plant.
3. Test power plant with ground hop kit.
4. Install power plant.
5. Test power plant inside vehicle.

References:

1. TM 8F152B-25&P/A

Administrative Instructions:

1. See Administrative Notes, para 11020.
 2. Due to power plant weight, the RAMRS coolant tower must be removed prior to performance step 1 and 4 when using a NON RAMRS AAVR7A1.
-

2141-ORGM-1024: Maintain AAV/FOV transmission

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot transmission assembly.
2. Remove transmission components.
3. Inspect transmission components.

4. Maintain transmission electrical system.
5. Install transmission components.

References:

1. TM 8F152B-25&P/A
2. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1025: Maintain AAV/FOV engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot engine.
2. Remove engine components.
3. Inspect engine components.
4. Install engine components.
5. Maintain engine electrical systems.

References:

1. TM 09674A-25&P/4
2. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1026: Maintain AAV/FOV cooling tower assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Inspect cooling tower assembly.
2. Disassemble cooling tower assembly.
3. Test radiator assembly.
4. Assemble cooling tower assembly.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1027: Maintain AAV/FOV final drives

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot final drive assembly.
2. Disconnect final drive assembly.
3. Remove final drive assembly.
4. Inspect final drive assembly.
5. Install/Repair final drive assembly.
6. Test final drive assembly.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1028: Maintain AAV/FOV hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot hydraulic system.
2. Maintain hydraulic bilge pump circuit.
3. Maintain water steer circuit.
4. Maintain hydraulic pump and reservoir circuit.
5. Maintain hydraulic ramp control circuit.
6. Maintain hydraulic plenum circuit.
7. Maintain hydraulic bow plane circuit.

References:

1. TM 8F152B-25&P/A
2. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1029: Maintain AAV/FOV electrical systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot electrical systems.
2. Maintain charging system circuit.
3. Maintain starting circuit.
4. Maintain cold start circuit.
5. Maintain lights and horn circuit.
6. Maintain slave circuit.
7. Maintain smoke generation system circuit.
8. Maintain tactical navigation circuit.
9. Maintain electrical bilge pump circuit.
10. Maintain power train circuit.
11. Maintain ventilation system circuit.
12. Maintain indicator panel and components.

References:

1. TM 8F152B-25&P/A
2. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1030: Maintain AAV/FOV fuel system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Maintain fuel system components.
2. Troubleshoot fuel system.
3. Inspect fuel system components.
4. Remove fuel system components.
5. Install fuel system components.

References:

1. TM 8F152B-25&P/A
2. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1031: Maintain AAV/FOV controls and linkages

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot controls and linkages.
2. Maintain brake controls and linkages.
3. Maintain fuel throttle controls and linkages.
4. Maintain steering linkages.
5. Maintain water jet deflector control components.

References:

1. TM 09674A-25&P/4
2. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1032: Maintain AAV/FOV fire suppression system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot automatic fire suppression system.
2. Maintain automatic fire suppression system components.
3. Troubleshoot manual fire suppression system.
4. Maintain manual fire suppression system components.
5. Utilize automatic fire suppression tester.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1033: Maintain AAV/FOV ventilation system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot ventilation system.
2. Maintain crew and engine compartment ventilation system.
3. Maintain vent fan.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1034: Maintain AAVR7/AAVR/A1 unique equipment

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Maintain recovery equipment.
2. Maintain maintenance equipment.

References:

1. TM 07267B-25&P/2
2. TM 07267B-10
3. TM 10004-10

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-1035: Maintain AAV/AAVP7A1 upgunned weapon station (UGWS)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot UGWS and components.
2. Inspect UGWS.
3. Remove UGWS components.
4. Maintain components.
5. Install components.
6. Remove UGWS.
7. Install UGWS.
8. Adjust UGWS.

References:

1. TM 10004A-25&P2

Administrative Instructions: See Administrative Notes, para 11020.

11060. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: CREW/OPERATOR MAINTENANCE

2141-CWOP-2001: Operate AAV/FOV cold weather equipment

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AAVP7A1, assigned tools, access to automated system with software, and the reference.

Standard: To ensure operational readiness per the reference.

Performance Steps:

1. Install winterization kit.
2. Operate and test winterization kit.
3. Remove winterization kit.
4. Store winterization kit.

References:

1. TM 09674A-25/2A
-

2141-CWOP-2002: Maintain AAVR7A1 tools and test equipment

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given applicable tools and test equipment, cleaning materials, access to automated system with software, and the references.

Standard: To ensure accountability and serviceability per the references.

Performance Steps:

1. Inventory tools and equipment.
2. Inspect tools and equipment.
3. Perform tool maintenance/cleaning, as required.
4. Annotate discrepancies.
5. Report discrepancies per unit SOP.

References:

1. Applicable SL-3s
2. MCO P4790.2
3. TM 07267B-10/1A

Administrative Instructions: See Administrative Notes, para 11020.

FUNCTIONAL AREA: ORGANIZATIONAL MAINTENANCE

2141-ORGM-2021: Maintain AAV/FOV cold weather equipment

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness for cold weather operations per the references.

Performance Steps:

1. Maintain personnel heater.
2. Maintain engine coolant heater.
3. Maintain battery box heat exchanger.

References:

1. TM 09674A-25&P/4
2. TM 09674A-25&P/4B
3. TM 9-2540-205-24&P

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-2022 MAINTAIN AAV/FOV AIR ASPIRATION SYSTEM

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot aspiration system.
2. Maintain air intake system.
3. Maintain grill and access system.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-2023: Maintain AAV/FOV water propulsion system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot water drive system.
2. Maintain water jet deflectors.
3. Maintain water propulsion unit drive shafts.
4. Maintain right angle drives.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-2024: Recover submerged AAV/FOV

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: SSgt, GySgt

Condition: Given a crew, assigned tools and equipment, access to automated system with software, and the references.

Standard: Prevent further damage or loss of assets per the references.

Performance Steps:

1. Conduct recovery operations.
2. Conduct salvage operations.
3. Conduct reconditioning operations.

References:

1. Unit Maintenance Management Standing Operating Procedures (MMSOP)
 2. TM 09674A-25&P/4
-

2141-ORGM-2025: Prepare AAV/FOV for shipment

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Sgt, SSgt, GySgt

Condition: Given a crew, assigned tools and equipment, access to automated system with software, and the reference.

Standard: Protect assets from physical damage during shipment per the reference.

Performance Steps:

1. Preserve vehicle.
2. Load and block vehicle.
3. Depreserve vehicle.

References:

1. TM 09674A-25&P/4
-

2141-ORGM-2026: Maintain stored AAV/FOV

Initial Training Setting: MOJT

Sustainment Interval: 36

Grade: Sgt, SSgt, GySgt

Condition: Given a stored AAV/FOV/RAMRS, assigned tools and equipment, access to automated system with software, and the references.

Standard: Protect assets from physical damage and deterioration per the references.

Performance Steps:

1. Perform in-storage care on vehicle.

References:

1. TM 09674A-10/3A
2. TM 09674A-25&P/4
3. TM 10004A-25&P2

Administrative Instructions: See Administrative Notes, para 11020.

2141-ORGM-2027: Perform an AAV/FOV modification

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure vehicle upgrades are accomplished per the references.

Performance Steps:

1. Identify applicable modifications.

2. Perform modification.
3. Record status of modification on applicable forms and records.

References:

1. Applicable MI or Engineering Change Proposal (ECP)
2. MCO P4790.2
3. SL-1-2
4. TI-5600
5. TM 4700-15/1

2141-ORGM-2028: Perform quality control inspection

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a repaired piece of equipment, applicable tools and equipment, access to automated system with software, an Equipment Repair Order (ERO), and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify applicable reference.
2. Record inspection data on checklist.
3. Recommend corrective action, as required.
4. Record inspection on ERO.

References:

1. Applicable equipment technical manuals
2. TM 4700-15/1

Administrative Instructions:

1. Reference(s) for secondary repairables are too numerous to list.
 2. Ensure applicable technical manuals are available to conduct inspections on secondary repairables.
 3. Assistance from the unit Maintenance Officer or Chief may be required.
-

FUNCTIONAL AREA: INTERMEDIATE MAINTENANCE

2141-INTM-2041: Maintain AAV/FOV cold weather equipment

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness for cold weather operations per the references.

Performance Steps:

1. Maintain personnel heater.
2. Maintain engine coolant heater.
3. Maintain battery box heat exchanger.

References:

1. TM 09674A-25&P/2
2. TM 09674A-25&P/4
3. TM 9-2540-205-24&P
4. TM 09674A-25&P/2A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2042: Maintain AAV/FOV Transmission

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Separate engine and transmission.
2. Remove components.
3. Inspect components.
4. Repair components.
5. Test components.
6. Install components.
7. Join engine and transmission.
8. Perform transmission run-in and test.

References:

1. TM 09674A-25&P/4
2. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2043: Maintain AAV/FOV engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Separate engine and transmission.
2. Remove components.
3. Inspect components.
4. Repair components.
5. Test components.
6. Install components.
7. Perform engine tune-up.
8. Join engine and transmission.
9. Perform engine ground hop test.

References:

1. TM 09674A-25&P/4
2. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2044: Maintain AAV/FOV cooling tower assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble cooling fan assembly.
2. Inspect components.
3. Repair components.

4. Assemble cooling fan assembly.
5. Test cooling fan assembly.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2045: Maintain AAV/FOV final drive

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassembly of final drive.
2. Inspect final drive.
3. Repair final drive.
4. Assemble final drive.
5. Test final drive.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2046: Maintain AAV/FOV water propulsion system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Maintain water propulsion units.
2. Maintain water jet deflectors.
3. Maintain water propulsion unit drive shafts.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2047: Maintain AAV/FOV hydraulic systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Maintain hydraulic bilge pumps' circuits.
2. Maintain hydraulic water steer unit circuit.
3. Maintain hydraulic pump and reservoir circuit.
4. Maintain hydraulic ramp control circuit.
5. Maintain hydraulic plenum circuit.
6. Maintain hydraulic bow plane circuit.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2048: Maintain AAV/FOV electrical systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Maintain charging system circuit.
2. Maintain starting circuit.
3. Maintain instrument distribution box.
4. Maintain power distribution box.
5. Maintain cold start circuit.
6. Maintain lights and horn circuit.
7. Maintain power plant circuit.
8. Maintain slave circuit.
9. Maintain smoke generation system circuits.
10. Maintain electrical bilge pump circuit.
11. Maintain power train circuit.

12. Maintain ventilation system circuit.
13. Maintain indicator panel and components.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2049: Maintain AAV/FOV fire suppression system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Troubleshoot automatic fire suppression system.
2. Remove automatic fire suppression system components.
3. Install automatic fire suppression system components.
4. Maintain automatic fire suppression system components.
5. Troubleshoot manual fire suppression system.
6. Remove manual fire suppression system components.
7. Install manual fire suppression system components.
8. Maintain manual fire suppression system components.
9. Utilize automatic fire suppression tester.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2050: Maintain AAVP7A1 upgunned weapon station (UGWS)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Remove components.

2. Inspect components.
3. Repair components.
4. Install components.
5. Adjust components.
6. Test components.

References:

1. TM 10004A-25&P2
2. TM 10004-10

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2051: Maintain AAVAl unique equipment

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Maintain air compressor.
2. Maintain welder.
3. Maintain winch.
4. Maintain crane.
5. Maintain fairlead.
6. Maintain magnetic clutches.
7. Maintain AC power electrical system.

References:

1. MCO P11262.2
2. TM 07267A-25&P/4
3. TM 07267B-10

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2052: Maintain AAV/FOV track tension adjuster

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, and access to automated system with software.

Standard: Ensure operational readiness.

Performance Steps:

1. Disassemble track tension adjuster.
2. Inspect components.
3. Repair components.
4. Assemble components.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2053: Repair hydraulic cylinder

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble hydraulic cylinder.
2. Inspect components.
3. Repair components.
4. Assemble components.
5. Test hydraulic cylinder.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2054: Repair bow plane actuator

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble bow plane actuator.
2. Inspect components.
3. Repair components.

4. Assemble components.
5. Test bow plane actuator.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2055: Repair transmission assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system and applicable software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble transmission.
2. Inspect transmission.
3. Repair transmission.
4. Assemble transmission.
5. Adjust transmission components.
6. Run-in and test on dynamometer.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2056: Repair speed change assembly

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble speed change assembly.
2. Inspect components.
3. Test components.
4. Repair components.
5. Assemble components.

6. Test components.
7. Assemble speed change assembly.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2057: Repair AAV/FOV clutch pack assemblies

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system and applicable software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Test clutch pack assembly.
2. Disassemble clutch pack assemblies.
3. Inspect components.
4. Repair components.
5. Assemble components.
6. Test assembly.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2058: Repair brake and steer assembly

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Inspect brake and steer assembly.
2. Disassemble brake and steer assembly.
3. Inspect components.
4. Repair components.
5. Assemble components.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2059: Repair range selector valve assembly

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble range selector valve assembly.
2. Inspect components.
3. Repair components.
4. Assemble components.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2060: Repair power take-off assembly

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble power take-off assembly.
2. Inspect components.
3. Repair components.
4. Assemble components.
5. Test assembly.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2061: Repair marine drive friction clutch

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Test marine drive friction clutch.
2. Disassemble marine drive friction clutch.
3. Inspect components.
4. Repair components.
5. Assemble components.
6. Test clutch.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2062: Repair fan drive friction clutch

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Test fan drive friction clutch.
2. Disassemble fan drive friction clutch.
3. Inspect components.
4. Repair components.
5. Assemble components.
6. Test clutch.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2063: Repair power driven rotary pump

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Disassemble power driven rotary pump.
2. Inspect components.
3. Repair components.
4. Assemble components.

References:

1. TM 09674A-25&P/4
2. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2064: Repair solenoid valve assembly

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Test solenoid valve assembly.
2. Disassemble solenoid valve assembly.
3. Inspect components.
4. Repair components.
5. Assemble components.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2065: Repair personnel heater

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Test personnel heater.
2. Disassemble personnel heater.
3. Inspect components.
4. Repair components.
5. Assemble heater assembly.
6. Test heater assembly.

References:

1. TM 9-2540-205-24&P

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2066: Repair AAV/FOV engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Disassemble engine.
2. Inspect engine.
3. Repair engine.
4. Assemble engine.
5. Perform engine tune-up.
6. Perform engine run-in and Dynamometer.

References:

1. TM 8F152B-25&P/A
2. Cummings Engine Manual

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2067: Repair AAV/FOV VT525 turbocharger

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble turbocharger.
2. Inspect components.
3. Repair components.
4. Assemble components.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2068: Repair water pump

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble water pump.
2. Inspect components.
3. Repair components.
4. Assemble components.

References:

1. TM 8F152B-25&P/A

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2069: Repair AAV/FOV cylinder heads

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Disassemble cylinder heads.
2. Inspect components.
3. Repair components.
4. Assemble components.
5. Test cylinder head.

References:

1. TM 8F152B-25&P/A
2. Cummings Engine Manual

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2070: Repair AAV/FOV final drive assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble final drive assembly.
2. Inspect components.
3. Repair components.
4. Assemble components.
5. Test final drive assembly.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2071: Repair hydraulic bilge pump

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble hydraulic bilge pump.
2. Inspect components.
3. Repair components.
4. Assemble components.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2072: Repair AAV/FOV upgunned weapon station (UGWS)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Test components.
2. Disassemble components.
3. Inspect components.
4. Repair components.
5. Assemble components.
6. Test components.

References:

1. TM 10004A-25&P2

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2073: Repair water jet propulsion unit

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble water jet propulsion unit.
2. Inspect components.
3. Repair components.
4. Assemble components.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2074: Repair deflector actuator assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble deflector actuator assembly.
2. Inspect components.
3. Repair components.
4. Assemble components.
5. Test cylinder.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2075: Repair crew vent fan

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble crew vent fan.
2. Inspect components.
3. Repair components.

4. Assemble fan components.
5. Test crew vent fan.

References:

1. TM 09674A-25&P/4

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2076: Repair radiator

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble radiator.
2. Inspect radiator.
3. Repair radiator.
4. Assemble radiator.
5. Test radiator.

References:

1. TM 8F152B-25&PA

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2077: Repair elevation mechanism

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble elevation mechanism.
2. Inspect components.
3. Repair components.
4. Assemble components.
5. Perform mechanism test.

References:

1. TM 10004A-25&P2

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2078: Repair power-assisted traverse mechanism

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given assigned tools and equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble power-assisted traverse mechanism.
2. Inspect components.
3. Repair components.
4. Assemble components.
5. Perform mechanism test.

References:

1. TM 10004A-25&P2

Administrative Instructions: See Administrative Notes, para 11020.

2141-INTM-2079: Maintain AAV/FOV MK154 launcher

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AAV/FOV, an AAVR7A1, a MK154 Line Charge Kit, assigned tools, and equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Inventory MK154 kit.
2. Install MK154.
3. Adjust MK154.
4. Conduct manual operation checks on MK154.
5. Conduct powered operation checks on MK154.
6. Maintain electrical system.
7. Maintain hydraulic system.
8. Remove MK154.

9. Store MK154.

References:

1. TM 09674A-10/3A
2. TM 09962A-10/1
3. TM 09962A-13&P/2

Administrative Instructions:

1. See Administrative Notes, para 11020.
 2. The AAV/FOV must be on level ground with sufficient overhead clearance to install or remove the MK154.
-

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2141-ADMN-2091: Manage maintenance functional areas

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: SSgt, GySgt

Condition: Given ground equipment maintenance publications and forms in a garrison or field environment, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure common shop operations are conducted to meet mission requirements through all echelons of maintenance per the references.

Performance Steps:

1. Ensure shop areas are designated, organized, and maintained.
2. Manage support and test equipment use, inventory, and maintenance.
3. Ensure maintenance of the technical publications library.
4. Coordinate supply support requirements.
5. Maintain preventive/corrective maintenance schedules.
6. Coordinate maintenance cycles and priority designators to ensure optimum equipment availability.
7. Ensure shop safety procedures are established and followed.
8. Ensure appropriate disposal of hazardous waste.
9. Conduct routine and unscheduled internal inspections, as required.

References:

1. ATCLASS II+ User's Manual
2. Applicable equipment technical manuals
3. MCO 4733.1
4. MCO 4790.18
5. MCO 4855.10
6. MCO 5100.8
7. MCO P11262.2
8. MCO P4400.150
9. MCO P4790.1
10. MCO P4790.2
11. TM 4700-15/1
12. UM 4790-5

2141-ADMN-2092: Administer maintenance management programs

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: SSgt, GySgt

Condition: Given ground equipment maintenance publications and forms in a garrison or field environment, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure common shop operations are conducted to meet mission requirements through all echelons of maintenance per the references.

Performance Steps:

1. Review requirements outlined in the references.
2. Review existing maintenance management procedures for compliance.
3. Ensure compliance with maintenance management programs.
 - a. Modification Control Program
 - b. Warranty Program
 - c. Inspect and Repair Only As Necessary Program
 - d. WIR Program
 - e. Quality Control Program
 - f. Administrative Dead Line Program
 - g. Contact Team Program
 - h. Maintenance Stand-Down Program
 - i. Corrosion Prevention and Control Program
 - j. Hazardous Communication Program
 - k. Tool Control and Calibration Programs
 - l. Embarkation Program
4. Ensure actions are completed to correct any deficiencies.

References:

1. MCO P4790.2
 2. TM 4700-15/1
 3. UM 4790-5
-

2141-ADMN-2093: Perform operator training

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: SSgt, GySgt

Condition: Given the requirement, subordinate personnel, and the appropriate references.

Standard: Support mission requirements per the references.

Performance Steps:

1. Provide instruction and guidance on the completion of equipment records.
2. Provide instruction and guidance on performance of operator maintenance.
3. Provide instruction and guidance on maintenance safety program.
4. Maintain records of all training conducted.

References:

1. MCO 4733.1
2. MCO 4790.18
3. MCO 5100.8
4. MCO P4790.1
5. MCO P4790.2
6. TM 4700-15/1
7. UM 4790-5

Administrative Instructions:

1. Maintenance and/or repairs limited to authorized echelon of maintenance.

2141-ADMN-2094: Perform MIM/ATLASS II+ systems administration

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: SSgt, GySgt

Condition: Given the requirement, access to automated system with software, and the references.

Standard: Support mission requirements per the references.

Performance Steps:

1. Perform mailbox maintenance.
2. Identify preventive maintenance requirements.
3. Develop preventive maintenance schedule.
4. Update job status.
5. Update man-hours.
6. Update priority.
7. Update meters.
8. Identify and validate modification requirements.
9. Develop calibration schedule.
10. Develop pre-expended bin (PEB)/parts package.
11. Create adhoc report.
12. Analyze adhoc report.
13. Perform evacuation procedures.

References:

1. ATLASS II+ User's Manual
2. MCO P4790.2

2141-ADMN-2095: Conduct military occupational specialty training program

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: SSgt, GySgt

Condition: Given subordinate ordnance maintenance personnel, an annual training plan, necessary equipment and supplies, and the references.

Standard: Provide appropriate training sustainment and progression for subordinates per the references.

Performance Steps:

1. Review annual training plan for training requirements.
2. Identify individual training requirements.
3. Develop a training schedule.

4. Apply training program policies and procedures.
5. Schedule support requirements.
6. Conduct ordnance maintenance training.
7. Participate in unit training evaluations and inspections.
8. Maintain records of all training conducted.

References:

1. Marine Corps Unit Training Management (UTM)
 2. MCO 1510.34
 3. MCO 1510.67
 4. MCO 1553.3
 5. MCRP 3-0A
 6. MCRP 3-0B
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CHAPTER 12

MOS 2146, MAIN BATTLE TANK REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	12000	12-1
EVENT CODING.....	12010	12-1
ADMINISTRATIVE NOTES.....	12020	12-1
INDEX OF INDIVIDUAL EVENTS BY LEVEL.....	12030	12-2
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	12040	12-5
1000 LEVEL INDIVIDUAL EVENTS.....	12050	12-8
2000 LEVEL INDIVIDUAL EVENTS.....	12060	12-46

MOS 2146, MAIN BATTLE TANK REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

12000. PURPOSE

This chapter contains individual training events for the Main Battle Tank Repairer/Technician.

12010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2146, indicating that the event is for MOS 2146, Main Battle Tank Repairer/Technician.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Crew/Operator Maintenance	CWOP	2146-CWOP-xxxx
Organizational Maintenance	ORGM	2146-ORGM-xxxx
Intermediate Maintenance	INTM	2146-INTM-xxxx
Administrative Functions	ADMN	2146-ADMN-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains events in both levels.

12020. ADMINISTRATIVE NOTES

1. Maintenance and/or repairs are limited to authorized echelon of maintenance.

2. Material Safety Data Sheet (MSDS) must be on hand for all POLs, paint, and other hazardous materials used in preventive/corrective maintenance.

12030. INDEX OF INDIVIDUAL EVENTS BY LEVEL

Event Code	Event	Page
	1000-LEVEL	
2146-CWOP-1001	Operate M1A1 tank	12-8
2146-CWOP-1002	Perform M88A2 operator PMCS	12-8
2146-CWOP-1003	Troubleshoot M88A2	12-9
2146-CWOP-1004	Operate M88A2	12-9
2146-CWOP-1005	Operate M88A2 auxiliary power unit	12-10
2146-CWOP-1006	Operate M88A2 communications system	12-11
2146-ORGM-1011	Maintain organizational tools and test equipment	12-12
2146-ORGM-1012	Perform M1A1 hull PMCS	12-12
2146-ORGM-1013	Perform M1A1 turret PMCS	12-13
2146-ORGM-1014	Troubleshoot M1A1 hull systems	12-13
2146-ORGM-1015	Troubleshoot M1A1 turret systems	12-14
2146-ORGM-1016	Maintain M1A1 powerpack	12-15
2146-ORGM-1017	Maintain M1A1 induction system	12-15
2146-ORGM-1018	Maintain M1A1 fuel system	12-16
2146-ORGM-1019	Maintain M1A1 cooling system	12-17
2146-ORGM-1020	Maintain M1A1 electrical system	12-17
2146-ORGM-1021	Maintain M1A1 track and suspension	12-18
2146-ORGM-1022	Maintain M1A1 accessory items	12-19
2146-ORGM-1023	Maintain M1A1 hull hydraulic system	12-20
2146-ORGM-1024	Maintain M1A1 fire suppression system	12-20
2146-ORGM-1025	Maintain M1A1 NBC system	12-21
2146-ORGM-1026	Maintain M1A1 turret electrical system	12-22
2146-ORGM-1027	Maintain M1A1 turret system	12-22
2146-ORGM-1028	Maintain M1A1 turret hydraulic system	12-23
2146-ORGM-1029	Maintain M1A1 turret armament system	12-23
2146-ORGM-1030	Maintain M1A1 fire control system	12-24
2146-ORGM-1031	Maintain M1A1 turret NBC system	12-25
2146-ORGM-1032	Perform M88A2 organizational PMCS	12-25
2146-ORGM-1033	Troubleshoot M88A2 systems	12-26
2146-ORGM-1034	Troubleshoot M88A2 electrical systems	12-27
2146-ORGM-1035	Maintain M88A2 power plant and assemblies	12-27
2146-ORGM-1036	Maintain M88A2 electrical systems	12-28
2146-ORGM-1037	Maintain M88A2 suspension components	12-29
2146-ORGM-1038	Maintain M88A2 fire extinguisher system	12-29
2146-ORGM-1039	Maintain M88A2 hydraulic system components	12-30
2146-ORGM-1040	Maintain M88A2 main hydraulic system	12-31
2146-ORGM-1041	Maintain M88A2 gas particulate filter unit	12-31
2146-ORGM-1042	Perform AVLB chassis/launcher PMCS	12-32
2146-ORGM-1043	Troubleshoot AVLB chassis/launcher	12-32
2146-ORGM-1044	Maintain AVLB power plant	12-33
2146-ORGM-1045	Maintain AVLB engine	12-34
2146-ORGM-1046	Maintain AVLB fuel system	12-34
2146-ORGM-1047	Maintain AVLB electrical system	12-35
2146-ORGM-1048	Maintain AVLB transmission and shifting components	12-36
2146-ORGM-1049	Maintain AVLB final drive	12-36
2146-ORGM-1050	Maintain AVLB brake system	12-37
2146-ORGM-1051	Maintain AVLB interior components	12-38

2146-ORGM-1052	Maintain AVLB gauges	12-38
2146-ORGM-1053	Maintain AVLB fire suppression system	12-39
2146-ORGM-1054	Maintain AVLB hydraulic system	12-40
2146-ORGM-1055	Maintain AVLB bridge	12-40
2146-ORGM-1056	Maintain M1A1 external auxiliary power unit (EAPU)	12-41
2146-ORGM-1057	Maintain M88A2 output reduction unit	12-41
2146-ORGM-1058	Perform annual condition inspection of M88A2 recovery vehicle	12-42
2146-ORGM-1059	Maintain ground hop M88A2 main winch	12-43
2146-INTM-1071	Troubleshoot M1A1 hull system components	12-44
2146-INTM-1072	Troubleshoot M1A1 turret system components	12-44
	2000-LEVEL	
2146-ORGM-2001	Troubleshoot M1A1 mine clearing blade	12-46
2146-ORGM-2002	Maintain M1A1 final drive	12-46
2146-ORGM-2003	Maintain M1A1 brake system	12-47
2146-ORGM-2004	Maintain M1A1 steering system	12-47
2146-ORGM-2005	Maintain M1A1 hull exterior	12-48
2146-ORGM-2006	Maintain M1A1 interior hull assembly	12-49
2146-ORGM-2007	Maintain M1A1 bilge pump	12-50
2146-ORGM-2008	Maintain M1A1 mineclearing blade	12-50
2146-ORGM-2009	Maintain M88A2 hull and related components	12-51
2146-ORGM-2010	Maintain M88A2 personal heater	12-51
2146-ORGM-2011	Maintain M88A2 auxiliary power unit	12-52
2146-ORGM-2013	Maintain M88A2 smoke grenade launchers	12-52
2146-ORGM-2014	Maintain M88A2 exhaust smoke generating system	12-53
2146-ORGM-2015	Maintain AVLB track and suspension system	12-53
2146-ORGM-2016	Maintain AVLB steering system	12-54
2146-ORGM-2017	Maintain AVLB exterior components	12-55
2146-ORGM-2018	Maintain AVLB personnel heater	12-55
2146-ORGM-2019	Maintain AVLB smoke generator system	12-56
2146-ORGM-2020	Maintain AVLB smoke grenade launcher	12-56
2146-ORGM-2021	Apply deep water fording kit to M88A2	12-57
2146-INTM-2031	Repair AGT turbine engine	12-58
2146-INTM-2032	Maintain M1A1 fuel system components	12-58
2146-INTM-2033	Maintain M1A1 cooling system components	12-59
2146-INTM-2034	Maintain M1A1 hull electrical system components	12-59
2146-INTM-2035	Repair M1A1 final drive	12-60
2146-INTM-2036	Maintain M1A1 steering assembly	12-61
2146-INTM-2037	Maintain M1A1 chassis accessories	12-61
2146-INTM-2038	Maintain M1A1 fire suppression equipment components	12-62
2146-INTM-2039	Maintain M1A1 turret electrical system components	12-62
2146-INTM-2040	Maintain M1A1 turret hydraulic system components	12-63
2146-INTM-2041	Maintain M1A1 turret assembly components	12-64
2146-INTM-2042	Maintain M1A1 armament system components	12-64
2146-INTM-2043	Maintain M1A1 mine clearing blade components	12-65
2146-INTM-2044	Maintain X11003B transmission	12-65
2146-INTM-2045	Maintain external auxiliary power unit (EAPU)	12-66
2146-INTM-2046	Troubleshoot M88A2	12-66
2146-INTM-2047	Maintain M88A2 systems	12-67
2146-INTM-2048	Maintain M88A2 turbosupercharger	12-68
2146-INTM-2049	Repair M88A2 engine	12-68

2146-INTM-2050	Repair M88A2 transmission	12-69
2146-INTM-2051	Repair M88A2 output reduction unit	12-69
2146-INTM-2052	Maintain M88A2 fuel system	12-70
2146-INTM-2053	Maintain AVLB engine	12-70
2146-INTM-2054	Maintain AVLB fuel system	12-71
2146-INTM-2055	Maintain AVLB electrical system	12-71
2146-INTM-2056	Maintain AVLB transmission	12-72
2146-INTM-2057	Maintain AVLB brake system components	12-72
2146-INTM-2058	Maintain AVLB suspension system	12-73
2146-INTM-2059	Maintain AVLB fire suppression system	12-74
2146-INTM-2060	Maintain AVLB launcher	12-74
2146-INTM-2061	Maintain AVLB final drive	12-75
2146-INTM-2062	Maintain intermediate tools and test equipment	12-75
2146-ADMN-2071	Manage maintenance functional areas	12-77
2146-ADMN-2072	Administer maintenance management programs	12-77
2146-ADMN-2073	Supervise maintenance management programs	12-78
2146-ADMN-2074	Perform MIMMS/ATLASS II+ systems administration	12-79
2146-ADMN-2075	Conduct MOS training program	12-79

12040. INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA

Event Code	Event	Page
	CREW/OPERATOR MAINTENANCE	
2146-CWOP-1001	Operate M1A1 tank	12-8
2146-CWOP-1002	Perform M88A2 operator PMCS	12-8
2146-CWOP-1003	Troubleshoot M88A2	12-9
2146-CWOP-1004	Operate M88A2	12-9
2146-CWOP-1005	Operate M88A2 auxiliary power unit	12-10
2146-CWOP-1006	Operate M88A2 communications system	12-11
	ORGANIZATIONAL MAINTENANCE	
2146-ORGM-1011	Maintain organizational tools and test equipment	12-12
2146-ORGM-1012	Perform M1A1 hull PMCS	12-12
2146-ORGM-1013	Perform M1A1 turret PMCS	12-13
2146-ORGM-1014	Troubleshoot M1A1 hull systems	12-13
2146-ORGM-1015	Troubleshoot M1A1 turret systems	12-14
2146-ORGM-1016	Maintain M1A1 powerpack	12-15
2146-ORGM-1017	Maintain M1A1 induction system	12-15
2146-ORGM-1018	Maintain M1A1 fuel system	12-16
2146-ORGM-1019	Maintain M1A1 cooling system	12-17
2146-ORGM-1020	Maintain M1A1 electrical system	12-17
2146-ORGM-1021	Maintain M1A1 track and suspension	12-18
2146-ORGM-1022	Maintain M1A1 accessory items	12-19
2146-ORGM-1023	Maintain M1A1 hull hydraulic system	12-20
2146-ORGM-1024	Maintain M1A1 fire suppression system	12-20
2146-ORGM-1025	Maintain M1A1 NBC system	12-21
2146-ORGM-1026	Maintain M1A1 turret electrical system	12-22
2146-ORGM-1027	Maintain M1A1 turret system	12-22
2146-ORGM-1028	Maintain M1A1 turret hydraulic system	12-23
2146-ORGM-1029	Maintain M1A1 turret armament system	12-23
2146-ORGM-1030	Maintain M1A1 fire control system	12-24
2146-ORGM-1031	Maintain M1A1 turret NBC system	12-25
2146-ORGM-1032	Perform M88A2 organizational PMCS	12-25
2146-ORGM-1033	Troubleshoot M88A2 systems	12-26
2146-ORGM-1034	Troubleshoot M88A2 electrical systems	12-27
2146-ORGM-1035	Maintain M88A2 power plant and assemblies	12-27
2146-ORGM-1036	Maintain M88A2 electrical systems	12-28
2146-ORGM-1037	Maintain M88A2 suspension components	12-29
2146-ORGM-1038	Maintain M88A2 fire extinguisher system	12-29
2146-ORGM-1039	Maintain M88A2 hydraulic system components	12-30
2146-ORGM-1040	Maintain M88A2 main hydraulic system	12-31
2146-ORGM-1041	Maintain M88A2 gas particulate filter unit	12-31
2146-ORGM-1042	Perform AVLB chassis/launcher PMCS	12-32
2146-ORGM-1043	Troubleshoot AVLB chassis/launcher	12-32
2146-ORGM-1044	Maintain AVLB power plant	12-33
2146-ORGM-1045	Maintain AVLB engine	12-34
2146-ORGM-1046	Maintain AVLB fuel system	12-34
2146-ORGM-1047	Maintain AVLB electrical system	12-35
2146-ORGM-1048	Maintain AVLB transmission and shifting components	12-36

2146-ORGM-1049	Maintain AVLB final drive	12-36
2146-ORGM-1050	Maintain AVLB brake system	12-37
2146-ORGM-1051	Maintain AVLB interior components	12-38
2146-ORGM-1052	Maintain AVLB gauges	12-38
2146-ORGM-1053	Maintain AVLB fire suppression system	12-39
2146-ORGM-1054	Maintain AVLB hydraulic system	12-40
2146-ORGM-1055	Maintain AVLB bridge	12-40
2146-ORGM-1056	Maintain M1A1 external auxiliary power unit (EAPU)	12-41
2146-ORGM-1057	Maintain M88A2 output reduction unit	12-41
2146-ORGM-1058	Perform annual condition inspection of M88A2 recovery vehicle	12-42
2146-ORGM-1059	Maintain ground hop M88A2 main winch	12-43
2146-ORGM-2001	Troubleshoot M1A1 mine clearing blade	12-46
2146-ORGM-2002	Maintain M1A1 final drive	12-46
2146-ORGM-2003	Maintain M1A1 brake system	12-47
2146-ORGM-2004	Maintain M1A1 steering system	12-47
2146-ORGM-2005	Maintain M1A1 hull exterior	12-48
2146-ORGM-2006	Maintain M1A1 interior hull assembly	12-49
2146-ORGM-2007	Maintain M1A1 bilge pump	12-50
2146-ORGM-2008	Maintain M1A1 mineclearing blade	12-50
2146-ORGM-2009	Maintain M88A2 hull and related components	12-51
2146-ORGM-2010	Maintain M88A2 personal heater	12-51
2146-ORGM-2011	Maintain M88A2 auxiliary power unit	12-52
2146-ORGM-2013	Maintain M88A2 smoke grenade launchers	12-52
2146-ORGM-2014	Maintain M88A2 exhaust smoke generating system	12-53
2146-ORGM-2015	Maintain AVLB track and suspension system	12-53
2146-ORGM-2016	Maintain AVLB steering system	12-54
2146-ORGM-2017	Maintain AVLB exterior components	12-55
2146-ORGM-2018	Maintain AVLB personnel heater	12-55
2146-ORGM-2019	Maintain AVLB smoke generator system	12-56
2146-ORGM-2020	Maintain AVLB smoke grenade launcher	12-56
2146-ORGM-2021	Apply deep water fording kit to M88A2	12-57
	INTERMEDIATE MAINTENANCE	
2146-INTM-1071	Troubleshoot M1A1 hull system components	12-44
2146-INTM-1072	Troubleshoot M1A1 turret system components	12-44
2146-INTM-2031	Repair AGT turbine engine	12-58
2146-INTM-2032	Maintain M1A1 fuel system components	12-58
2146-INTM-2033	Maintain M1A1 cooling system components	12-59
2146-INTM-2034	Maintain M1A1 hull electrical system components	12-59
2146-INTM-2035	Repair M1A1 final drive	12-60
2146-INTM-2036	Maintain M1A1 steering assembly	12-61
2146-INTM-2037	Maintain M1A1 chassis accessories	12-61
2146-INTM-2038	Maintain M1A1 fire suppression equipment components	12-62
2146-INTM-2039	Maintain M1A1 turret electrical system components	12-62
2146-INTM-2040	Maintain M1A1 turret hydraulic system components	12-63
2146-INTM-2041	Maintain M1A1 turret assembly components	12-64
2146-INTM-2042	Maintain M1A1 armament system components	12-64
2146-INTM-2043	Maintain M1A1 mine clearing blade components	12-65
2146-INTM-2044	Maintain X11003B transmission	12-65
2146-INTM-2045	Maintain external auxiliary power unit (EAPU)	12-66
2146-INTM-2046	Troubleshoot M88A2	12-66

2146-INTM-2047	Maintain M88A2 systems	12-67
2146-INTM-2048	Maintain M88A2 turbosupercharger	12-68
2146-INTM-2049	Repair M88A2 engine	12-68
2146-INTM-2050	Repair M88A2 transmission	12-69
2146-INTM-2051	Repair M88A2 output reduction unit	12-69
2146-INTM-2052	Maintain M88A2 fuel system	12-70
2146-INTM-2053	Maintain AVLB engine	12-70
2146-INTM-2054	Maintain AVLB fuel system	12-71
2146-INTM-2055	Maintain AVLB electrical system	12-71
2146-INTM-2056	Maintain AVLB transmission	12-72
2146-INTM-2057	Maintain AVLB brake system components	12-72
2146-INTM-2058	Maintain AVLB suspension system	12-73
2146-INTM-2059	Maintain AVLB fire suppression system	12-74
2146-INTM-2060	Maintain AVLB launcher	12-74
2146-INTM-2061	Maintain AVLB final drive	12-75
2146-INTM-2062	Maintain intermediate tools and test equipment	12-75
	ADMINISTRATIVE FUNCTIONS	
2146-ADMN-2071	Manage maintenance functional areas	12-77
2146-ADMN-2072	Administer maintenance management programs	12-77
2146-ADMN-2073	Supervise maintenance management programs	12-78
2146-ADMN-2074	Perform MIMMS/ATLASS II+ systems administration	12-79
2146-ADMN-2075	Conduct MOS training program	12-79

12050. 1000-LEVEL MAIN BATTLE TANK REPAIRER INDIVIDUAL TRAINING

FUNCTIONAL AREA: CREW/OPERATOR MAINTENANCE

2146-CWOP-1001: Operate M1A1 Tank

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 tank, ramp or test drive area, and the references.

Standard: Determine operational readiness per the references.

Performance Steps:

1. Perform pre-operation checks.
2. Operate vehicle as per instructions.
3. Perform during operation checks.
4. Perform after operation checks.

References:

1. TM 08953A-10-1
2. TM 08953A-10-2

Distance Learning Products:

1. MCI 18.43, Operating the M1A1 Tank
-

2146-CWOP-1002: Perform M88A2 operator PMCS

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, assigned tools, test equipment, suitable driving area, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform pre-operation checks.
2. Perform during operation checks and services.
3. Perform post-operation checks.
4. Perform weekly operation checks and services.

References:

1. LO 9-2350-256-12
2. TM 9-2350-256-10
3. TM 9-2350-292-10

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include inspection and servicing the following items as required: track and suspension system, vision devices, .50-caliber machine gun and mount, instruments, dome and blackout marker lights, engine air cleaner, welding equipment, M88A2 under usual condition, gas-particulate filter unit, deep water fording kit, and M239 smoke grenade system.
-

2146-CWOP-1003: Troubleshoot M88A2

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, assigned tools and test equipment, access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Operate vehicle as per instructions.
2. Identify any/all malfunctions.
3. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2350-256-10
2. TM 9-2350-292-10

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include inspecting and checking the following items: engine, operator's control, transmission, winches and booms, auxiliary hydraulic system, light system, auxiliary power unit, ventilation blower, personnel heater, tracks and suspension, gas-particulate system, M239 smoke grenade system, and exhaust smoke generating system.
-

2146-CWOP-1004: Operate M88A2

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, suitable driving area, and the references.

Standard: Support maintenance, towing, and recovery operations per the references.

Performance Steps:

1. Perform pre-operation checks.
2. Perform during operation checks.
3. Perform after operation checks.
4. Operate in normal/adverse conditions.
5. Perform recovery operations.
6. Perform towing operations.
7. Perform lifting operations.
8. Operate vehicle armament system.
9. Maintain logbook.

References:

1. FM 20-22
2. FM 23-65
3. FM 31-70
4. FM 31-71
5. FM 31-76
6. FMFRP 4-34
7. LO 9-2350-256-12
8. MCO P11262.2
9. TM 4700-15/1
10. TM 9-1005-213-10
11. TM 9-207
12. TM 9-2350-256-10
13. TM 9-2350-292-10
14. TM 9-237

Administrative Instructions: Steps include the following: starting/stopping main engine, driving the M88A2, stopping the M88A2, performing towing and recovery operations, preparing hydraulic system for operations, operating the spade, boom, hoist winch, main winch, gas-particulate filter unit, smoke generator system, M239 smoke grenade system, and .50-caliber machine gun, use of lockout blocks and deep water fording kit, and maintaining the logbook.

2146-CWOP-1005: Operate M88A2 auxiliary power unit

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2 and the references.

Standard: Support maintenance and recovery operations per the references.

Performance Steps:

1. Perform pre-operation checks.
2. Perform during operation checks.
3. Conduct emergency hydraulic operations.
4. Conduct refuel/defuel operations.
5. Operate impact wrench.
6. Perform post-operation checks upon completion.
7. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2350-256-10
2. TM 9-2350-292-10

2146-CWOP-1006: Operate M88A2 communications system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2 with communications equipment and the references.

Standard: Ensure effective communication in a combat and garrison environment per the references.

Performance Steps:

1. Perform preventive maintenance checks and services (PMCS).
2. Setup radios for operation.
3. Operate radio sets.
4. Operate intercommunication set.

References:

1. TM 11-5820-890-10-1
 2. TM 9-2350-256-10
 3. TM 9-2350-292-10
-

FUNCTIONAL AREA: ORGANIZATIONAL MAINTENANCE

2146-ORGM-1011: Maintain organizational tools and test equipment

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given applicable tools and test equipment, access to automated system with software, and the references.

Standard: Ensure accountability and serviceability per the references.

Performance Steps:

1. Perform user maintenance for common tools.
2. Perform user maintenance for special tools.
3. Perform user maintenance for test equipment.
4. Perform user maintenance for M1A1 tools.
5. Perform user maintenance for M88A2 tools.
6. Perform user maintenance for AVLB tools.
7. Inventory kits, sets, chests, and equipment, and complete forms and records.
8. Requisition required items and reconcile with supporting supply source.
9. Complete maintenance and/or administrative records and procedures.

References:

1. MCO P4790.1
2. MCO P4790.2
3. SL-3-00456A
4. SL-3-03533A
5. SL-3-07769B
6. SL-3-07928A
7. SL-3-08940A
8. SL-3-08953A
9. SL-3-09561A
10. SL-3-09590A
11. SL-3-10025A

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1012: Perform M1A1 hull preventive maintenance checks and services (PMCS)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system, applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform semiannual PMCS.
3. Perform biannual/annual PMCS.

References:

1. LI 08953A-12
2. TM 08953A-20-2-1
3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1013: Perform M1A1 turret preventive maintenance checks and services (PMCS)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system and applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform semiannual PMCS.
3. Perform biannual/annual PMCS.
4. Perform borescope PMCS.
5. Perform erosion gauge PMCS.

References:

1. LI 08953a-12
2. TM 08953A-20-3-1
3. TM 08953A-20-3-2
4. TM 08953A-20-3-3
5. TM 08953A-20-3-4
6. TM 750-116
7. TM 9-6115-542-24&P/1

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1014: Troubleshoot M1A1 hull systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system, applicable software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Operate M1A1 tank, as required.
2. Identify and isolate malfunctions.
3. Troubleshoot hull system.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1
7. TM 9-4910-741-14-1
8. TM 9-4910-741-14-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: fuel supply system, hull auxiliary system, hull electrical system, NBC system, engine system, transmission system, hydraulic system, and NBC back-up system.

2146-ORGM-1015: Troubleshoot M1A1 turret systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system, applicable software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Operate M1A1 tank, as required.
2. Identify and isolate malfunctions.
3. Troubleshoot turret system.

References:

1. TM 08953A-20-3-1
2. TM 08953A-20-3-2
3. TM 08953A-20-3-3
4. TM 08953A-20-3-4
5. TM 08953A-24P-2
6. TM 9-4910-741-14-1

7. TM 9-4910-741-14-2
8. TM 9-6115-542-24&P/1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes the following: turret electrical system, hydraulic and gun/turret drive system, smoke system, fire control system, commander's weapon station grenade system, auxiliary system, EAPU electrical system, and turret circuit breaker system.
-

2146-ORGM-1016: Maintain M1A1 powerpack

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 powerpack, appropriate lifting device, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: To ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Isolate/Identify discrepancies and unserviceable parts or components.
3. Perform corrective maintenance, as required.
4. Complete maintenance and/or administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes the following: engine rear exhaust duct seals, exhaust duct door assembly panel, exhaust duct nut, covers, screw assembly chain and washers, turbine exhaust duct, engine step plate, plenum-to-engine plain seal, ground hop power pack, and ground hop pressure fluid filter.
-

2146-ORGM-1017: Maintain M1A1 induction system

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: precleaner-baffle, air cleaner assembly intake filter elements, air cleaner clamp, and pulse jet air system.

2146-ORGM-1018: Maintain M1A1 fuel system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, appropriate lift capability, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: testing and replacing fuel nozzle, and troubleshooting fuel pumps.

2146-ORGM-1019: Maintain M1A1 cooling system

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-2-1
3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5
7. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: oil cooler fan ducts, oil cooler fan accessory gear box, cleaning left or right side oil cooler assembly, oil cooler fan, fan drive unit, double universal propeller shaft, engine and left side transmission oil cooler fan shroud seal, right side transmission oil cooler fan shroud seal, and oil cooler fan drive unit oil tube assemblies.

2146-ORGM-1020: Maintain M1A1 electrical system

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1
7. TM 9-4910-741-14-1
8. TM 9-4910-741-14-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes training on the following systems and components: generator, voltage regulator, starter motor 100-amp electromagnetic relay, ignition electrical, ignition exciter, engine starter, driver's instrument panel, driver's master control panel, driver's alert panel, air temperature controller, digital electronic control unit and components, hull networks distribution box and components, disconnect panel junction box, stoplight switch assembly and electrical bracket, headlights and components, stoplight-taillight and components, terminal boards (buss bar), turret networks box, tank commander's panel, turret distribution valve, slip ring, loader's panel, and maintaining batteries, wiring harnesses, and cable assemblies.

2146-ORGM-1021: Maintain M1A1 track and suspension

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, appropriate lift capability, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-2-1

3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5
7. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: suspension torsion bars, torsion bar cover, track support roller, idler wheel hub and arm assembly, upper spindle oil seal retainer, track adjusting link replacement, solid rubber roadwheel, shock absorber torsion bar housing assembly maintenance, road wheel hub and arm assembly, and track assembly.

2146-ORGM-1022: Maintain M1A1 accessory items

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-20-3-1
7. TM 08953A-20-3-2
8. TM 08953A-20-3-3
9. TM 08953A-20-3-4
10. TM 08953A-24P-1
11. TM 08953A-24P-2
12. TM 9-2540-205-24&P
13. TM 9-6115-542-24&P/1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes training the following systems and components: vehicular (personnel) heater, smoke generator components, driver periscope wiper, and external auxiliary power unit (EAPU).
-

2146-ORGM-1023: Maintain M1A1 hull hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-2-1
3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5
7. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes training on the following systems and components: auxiliary hydraulic rotary pump, main hydraulic centrifugal pump, hydraulic distribution manifold, hydraulic distribution manifold pressure switch, hydraulic reservoir, hydraulic filter manifold tube assembly, hydraulic manifold filter elements, hydraulic heat exchanger and mounting bracket, hydraulic hull assemblies, tube assemblies, and fittings.
-

2146-ORGM-1024: Maintain M1A1 fire suppression system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes training on the following systems and components: fire sensor, fire extinguisher control amplifier, reset switch assembly, fire extinguisher tube assemblies and nipples, valve and bottle assemblies, fire extinguisher manifold, fire extinguisher system manual controls, and fire extinguisher lines, hoses, and fittings inspections.
-

2146-ORGM-1025: Maintain M1A1 NBC system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: To ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-2-1
3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5
7. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes training on the following systems and components: particle separator, duct assemblies, hose and tube assemblies, NBC filter assembly, Venturi air circulating duct and pressure regulating flow valve, prioritization valve, and NBC system components, switches inspection and replacement.
-

2146-ORGM-1026: Maintain M1A1 turret electrical system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-3-1
3. TM 08953A-20-3-2
4. TM 08953A-20-3-3
5. TM 08953A-20-3-4
6. TM 08953A-24P-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes training on the following systems and components: commander's control panel assembly, loader's panel, turret networks box, hull/turret slip ring assembly, blasting machine, commander's weapon station azimuth drive system, commander's weapon station power control unit, turret electrical wiring harnesses and cable assemblies, turret switches, and turret dome light.
-

2146-ORGM-1027: Maintain M1A1 turret system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: To ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-3-1
3. TM 08953A-20-3-2
4. TM 08953A-20-3-3
5. TM 08953A-20-3-4
6. TM 08953A-24P-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes training on the following systems and components: turret exterior storage boxes, turret ammunition doors, safety guards and pads, turret ammunition racks, turret blow off panels, NBC pressure relief guard and cover, turret bustle ammunition compartment, and turret interior stowage boxes.

2146-ORGM-1028: Maintain M1A1 turret hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: To ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12 and 24P-2
2. TM 08953A-20-3-1
3. TM 08953A-20-3-2
4. TM 08953A-20-3-3
5. TM 08953A-20-3-4

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes training on the following systems and components: traverse servomechanism assembly, elevation servomechanism assembly, turret distribution valve, hand pump assembly, manual elevation/main accumulator assemblies, and turret hydraulic lines and fittings.

2146-ORGM-1029: Maintain M1A1 turret armament system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-3-1
3. TM 08953A-20-3-2
4. TM 08953A-20-3-3
5. TM 08953A-20-3-4
6. TM 08953A-24P-2

Administrative Instructions:

1. Maintenance and/or repairs are limited to the authorized echelon of maintenance.
2. Material Safety Data Sheet (MSDS) must be on hand for all POLs, paint, and other hazardous materials used in preventive/corrective maintenance.
3. Formal school training for this task includes the following: 120mm gun, smoke grenade launcher, loader's weapon mount, coaxial machine gun mount, and commander's weapon mount.

2146-ORGM-1030: Maintain M1A1 fire control system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-3-1
2. TM 08953A-20-3-2
3. TM 08953A-20-3-3

4. TM 08953A-20-3-4
5. TM 08953A-24P-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes the following: commander's extension, gunner's primary sight, commander's control assembly, line-of-sight electronics unit, commander's weapon station manual drive assembly, commander's weapon station unity tank periscope and junction box, commander's weapon station sight, handle, and linkage computer electronics unit, computer control panel, gun/turret drive electronics unit, crosswind sensor, cant unit assembly, rate gyroscopes, elevation mechanism disk filter, gunner's control grip assembly, laser rangefinder, thermal imaging system, collimator assembly, and gunner's auxiliary sight.
-

2146-ORGM-1031: Maintain M1A1 turret NBC system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-3-1
2. TM 08953A-20-3-2
3. TM 08953A-20-3-3
4. TM 08953A-20-3-4
5. TM 08953A-24P-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes the following: commander's, gunner's, and loader's NBC equipment, and gas particulate filter system.
-

2146-ORGM-1032: Perform M88A2 organizational PMCS

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, a driving area, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M88A2 to determine malfunctions.
2. Perform limited technical inspection (LTI).
3. Perform semiannual PMCS.
4. Remove unserviceable parts or components.
5. Repair/Replace unserviceable parts or components.
6. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-256-12
2. TM 9-2350-256-10
3. TM 9-2350-256-20
4. TM 9-2350-256-24P-1
5. TM 9-2350-292-10
6. TM 9-2350-292-20

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1033: Troubleshoot M88A2 systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, a driving area, assistant(s), access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Operate M88A2 to determine malfunctions.
2. Perform limited technical inspection (LTI).
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-292-10
4. TM 9-2350-292-20

Administrative Instructions:

1. See Administrative Notes, para 12020.

2. Formal school training for this task includes the following: engine, fuel, and air intake/exhaust systems, oil cooling system, transmission center section and output reduction gears, driver controls, tracks and suspension, main and hoist winches, hoisting boom, spade, impact wrench, fuel transfer pump, main hydraulic system, auxiliary hydraulic system, auxiliary power unit, personnel heater, gas-particulate filter unit, M239 smoke grenade system, and exhaust smoke generating system.

2146-ORGM-1034: Troubleshoot M88A2 electrical systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Operate M88A2 to determine malfunctions.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-292-10
4. TM 9-2350-292-20

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes the following: master relay system and slave receptacle, main engine manifold preheater and starting system, main engine fuel supply electrical system, main engine monitoring system, governor control system, transmission monitoring system, generator, APU starting system, APU fuel system, APU monitoring system, vehicle warning system, vehicle warning system-external vehicle warning horn, personnel heater and control system, interior lighting system, exterior lighting system, filter unit, gas-particulate, hydraulic reservoir monitoring system, smoke generating system, and main engine generator blower.
-

2146-ORGM-1035: Maintain M88A2 power plant and assemblies

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-256-12
2. TM 9-2350-256-10
3. TM 9-2350-256-20
4. TM 9-2350-256-24P-1
5. TM 9-2350-292-10
6. TM 9-2350-292-20
7. TM 9-2350-292-24P
8. TM 9-4910-571-12&P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: main engine fuel, air intake and exhaust system, main engine cooling system, transmission, and removing/replacing power plant.

2146-ORGM-1036: Maintain M88A2 electrical systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-256-24P-1
4. TM 9-2350-292-10
5. TM 9-2350-292-20
6. TM 9-2350-292-24P
7. TM 9-6140-200-12

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: charging/starting system and vehicle batteries, gauge and switch panels, lighting system, and vehicle wiring.

2146-ORGM-1037: Maintain M88A2 suspension components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-256-12
2. TM 9-2350-256-10
3. TM 9-2350-256-20
4. TM 9-2350-256-24P-1
5. TM 9-2350-292-10
6. TM 9-2350-292-20
7. TM 9-2350-292-24P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: bumper springs and brackets, drive sprockets, compensating idler arm components, road wheel arm and hub components, shocks, torsion bars, track support roller components, and track.

2146-ORGM-1038: Maintain M88A2 fire extinguisher system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-256-24P-1
4. TM 9-2350-292-10
5. TM 9-2350-292-20
6. TM 9-2350-292-24P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: removal/replacement and weighing of fire bottles.

2146-ORGM-1039: Maintain M88A2 hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-256-12
2. TM 9-2350-256-10
3. TM 9-2350-256-20
4. TM 9-2350-256-24P-1
5. TM 9-2350-256-24P-2
6. TM 9-2350-292-10
7. TM 9-2350-292-20
8. TM 9-2350-292-24P

Administrative Instructions:

1. See Administrative Note #1.
 2. Formal school training for this task includes the following: main winch and spade assembly, hoist winch assembly, wire rope and roller assembly, and hoisting boom assembly.
-

2146-ORGM-1040: Maintain M88A2 main hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-256-12
2. TM 9-2350-256-10
3. TM 9-2350-256-20
4. TM 9-2350-256-24P-1
5. TM 9-2350-292-10
6. TM 9-2350-292-20
7. TM 9-2350-292-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1041: Maintain M88A2 gas particulate filter unit

Initial Training Setting: FS

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-256-24P-1
4. TM 9-2350-292-10
5. TM 9-2350-292-20

6. TM 9-2350-292-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1042: Perform AVLB chassis/launcher PMCS

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform semiannual PMCS.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-203-14
9. TM 5-5420-203-24P
10. TM 5-5420-228-24

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1043: Troubleshoot AVLB chassis/launcher

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-203-14
9. TM 5-5420-203-24P
10. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: power plant, transmission, brakes, steering, hull power generator/regulator, fire extinguisher, and hydraulics.

2146-ORGM-1044: Maintain AVLB power plant

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: replacing power plant, disconnecting power take-off, and testing power plant using the ground hop.

2146-ORGM-1045: Maintain AVLB engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: engine oil cooler and transmission oil cooler.

2146-ORGM-1046: Maintain AVLB fuel system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: fuel pumps, engine fuel pump, and air cleaner system.

2146-ORGM-1047: Maintain AVLB electrical system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.

2. Formal school training for this task includes the following: engine generator and regulator assemblies, starter, engine fuel injector pump, master control panel, batteries, and associated components.

2146-ORGM-1048: Maintain AVLB transmission and shifting components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: shifting control and related parts, transmission oil breather tube, transmission main oil filter element, transmission side oil strainer assembly, adjusting shift linkage, neutral shift switch, and servobands.

2146-ORGM-1049: Maintain AVLB final drive

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: final drives, final drive air pressure relief drive, and universal joint.

2146-ORGM-1050: Maintain AVLB brake system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.

2. Formal school training for this task includes the following: master cylinder, brake pressure gauge, brake quick disconnect and hose assembly, brake left and right hand slave cylinders, tube assemblies, brake control housing, parking brake control assemblies, bell crank, and bleed/adjust hydraulic brake system.

2146-ORGM-1051: Maintain AVLB interior components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. MCO 4790.18
3. TM 5-5420-202-10
4. TM 5-5420-202-20-1
5. TM 5-5420-202-20-2
6. TM 5-5420-202-20-3
7. TM 5-5420-202-20-4
8. TM 5-5420-202-24P
9. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: engine access covers, bulkhead PTO ring, and slip ring box access cover.

2146-ORGM-1052: Maintain AVLB gauges

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 5-5420-202-10
2. TM 5-5420-202-20-1
3. TM 5-5420-202-20-2
4. TM 5-5420-202-20-3
5. TM 5-5420-202-20-4
6. TM 5-5420-202-24P
7. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Formal school training for this task includes the following: speedometer, speedometer flexible shaft assembly, speedometer adapter rotating bracket and speedometer shaft adapter assemblies, tachometer, tachometer bulkhead shaft adapter, tachometer flexible shaft assemblies, and tachometer-speedometer mounting bracket.

2146-ORGM-1053: Maintain AVLB fire suppression system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.

2. Formal school training for this task includes the following: interior release mechanism, exterior release handle body assembly, fixed fire extinguisher outside release handle control assembly, control valve assembly, fixed fire extinguisher cylinder, fixed fire extinguisher delay bottle and tubes, fixed fire extinguisher mounting bracket, fixed fire extinguisher manifold, discharge valves, tubes, engine compartment discharge manifold, and related parts.

2146-ORGM-1054: Maintain AVLB hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Formal school training for this task includes the following: valves and associated hydraulics, filter, hose assemblies, hydraulic cylinders, and hydraulic reservoir components.
-

2146-ORGM-1055: Maintain AVLB bridge

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, assigned tools, test equipment, assistant(s), and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 5-5420-203-14
2. TM 5-5420-203-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1056: Maintain M1A1 External M1A1 external auxiliary power unit (EAPU)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, assigned tools, test equipment, assistant(s), and references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-264-12
2. TM 08953A-20-3-1
3. TM 08953A-20-3-2
4. TM 08953A-20-3-3
5. TM 08953A-20-3-4
6. TM 08953A-24P-2
7. TM 9-6115-542-24&P/1

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1057: Maintain M88A2 output reduction unit

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, assigned tools, test equipment, assistant(s), and references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-2-1
3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5
7. TM 08953A-24P-1
8. TM 9-2350-292-10
9. TM 9-2350-292-20
10. TM 9-2350-292-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-1058: Perform annual condition inspection of M88A2 recovery vehicle

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, applicable forms, an assistant, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Inspect lifting components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. MCO P11262.2
 2. MCO P4790.1
 3. MCO P4790.2
 4. TM 4700-15/1
 5. TM 9-2350-292-10
 6. TM 9-2350-292-20
 7. TM 9-2350-292-24P
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2146-ORGM-1059: Maintain ground hop M88A2 main winch

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, assigned tools, test equipment, suitable driving area, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-292-10
2. TM 9-2350-292-20
3. TM 9-2350-292-24P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include inspection, repair, and/or replacement of the following: pulling the nose cone, paying out the main winch, and limit switch adjustments.
-

FUNCTIONAL AREA: INTERMEDIATE MAINTENANCE

2146-INTM-1071: Troubleshoot M1A1 hull system components

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given M1A1 hull system components, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Complete required maintenance/administrative forms and records.

References:

1. TM 08953A-24-1
2. TM 08953A-34/6-1
3. TM 08953A-34/6-2
4. TM 9-2835-255-34
5. TM 9-4931-586-12-1&P
6. TM 9-4931-586-12-2&P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps must include inspection and troubleshooting of the following: in-tank fuel pump, driver's instrument panel, driver's master control panel, driver's alert panel, temperature control unit, digital electronic control unit, hull power distribution box, hull networks distribution box, dome light, hull wiring harnesses, and shift control assembly.
-

2146-INTM-1072: Troubleshoot M1A1 turret system components

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given M1A1 turret system components, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Operate M1A1.

2. Troubleshoot malfunctions.
3. Complete maintenance/administrative forms and records.

References:

1. TM 08953A-24-1
2. TM 08953A-34/6-1
3. TM 08953A-34/6-2
4. TM 9-2835-255-34
5. TM 9-4931-586-12-1&P
6. TM 9-4931-586-12-2&P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps must include inspection and checking the following: turret network box, loader's panel, dome light, tank commander's panel, commander's weapon station control handle, commander's weapon station power control unit, gun/turret drive electronic unit, commander's control assembly, gunner's control assembly, elevating mechanism, traversing mechanism, turret wiring harness, and hand pump assembly.
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12060. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: ORGANIZATIONAL MAINTENANCE

2146-ORGM-2001: Troubleshoot M1A1 mine clearing blade

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 equipped with mine clearing blade, necessary tools and test equipment, assistant(s), access to automated system and applicable software.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Inspect mine clearing blade and control system.
2. Identify/Isolate malfunctions.
3. Complete maintenance and/or administrative records and procedures.

References:

1. TM 2590-10/1
2. TM 2590/23&P/2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include checking raising indicator lamp, moldboard, and mine clearing blade motor.
-

2146-ORGM-2002: Maintain M1A1 final drive

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. TM 08953A-20-2-1

3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include servicing the following: final drive tube assembly, final drive, final drive packing retainer and packing, broken final drive cam headed straight pin or disconnect cam, and connecting final drive.

2146-ORGM-2003: Maintain M1A1 brake system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12 and -24P-1
2. TM 08953A-20-2-1
3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include servicing the following: dial pressure gauge, parking brake components, parking brake lock, service brake control components, and adjusting parking brake control assemblies, and service brake control assembly.

2146-ORGM-2004: Maintain M1A1 steering system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, appropriate lift capability, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Notes, 12020.
2. Steps include servicing the following: replacing throttle steering assembly components, steering system components, and shift control assembly; adjusting throttle control and steering linkages; and testing throttle, steering, and shift control assemblies.

2146-ORGM-2005: Maintain M1A1 hull exterior

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LI 08953A-12
2. MCO 4790.18
3. TM 08953A-20-2-1
4. TM 08953A-20-2-2
5. TM 08953A-20-2-3
6. TM 08953A-20-2-4
7. TM 08953A-20-2-5
8. TM 08953A-20-3-1

9. TM 08953A-20-3-2
10. TM 08953A-20-3-3
11. TM 08953A-20-3-4
12. TM 08953A-24P-1
13. TM 08953A-24P-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include servicing the following: top deck and grilles, sponson, battery, precleaner, engine covers, doors, and grille, NBC sponson box metal grille and access covers, upper ammunition armored plates, lower blow-off plates, hull skirts and vehicular fenders, rear grille mounting hinges, cracked skirts, repair/replace tow pintle assembly, and maintaining inflatable seat.

2146-ORGM-2006: Maintain M1A1 interior hull assembly

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. MCO 4790.18
2. TM 08953A-20-2-1
3. TM 08953A-20-2-2
4. TM 08953A-20-2-3
5. TM 08953A-20-2-4
6. TM 08953A-20-2-5
7. TM 08953A-20-3-1
8. TM 08953A-20-3-2
9. TM 08953A-20-3-3
10. TM 08953A-20-3-4
11. TM 08953A-24P-1
12. TM 08953A-24P-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include servicing the following: driver hatch and lifting mechanism, driver periscopes, driver periscope washer, drain valves, ammunition compartment, and repair/replace driver vehicular seat, and headrest.
-

2146-ORGM-2007: Maintain M1A1 bilge pump

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 08953A-20-2-1
2. TM 08953A-20-2-2
3. TM 08953A-20-2-3
4. TM 08953A-20-2-4
5. TM 08953A-20-2-5
6. TM 08953A-24P-1

Administrative Instructions:

1. See Administrative Note #1.
2. Steps include servicing the following: replacing centrifugal bilge pump unit and repair/replace bilge pump unit tube assembly, metallic bent tube, and rubber hoses.

2146-ORGM-2008: Maintain M1A1 mineclearing blade

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, necessary tools and test equipment, assistant(s), access to automated system with software, and the reference.

Standard: To ensure operational readiness per the reference.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform semiannual preventive maintenance checks and services (PMCS).
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance/administrative records and procedures.

References:

1. TM 2590/23&P/2

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2009: Maintain M88A2 hull and related components

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-256-12
2. MCO 4790.18
3. TM 9-2350-256-10
4. TM 9-2350-256-20
5. TM 9-2350-256-24P-1
6. TM 9-2350-292-10
7. TM 9-2350-292-20
8. TM 9-2350-292-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2010: Maintain M88A2 personnel heater

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-256-24P-1
4. TM 9-2350-292-10
5. TM 9-2350-292-20
6. TM 9-2350-292-24P
7. TM 9-2540-205-24&P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2011: Maintain M88A2 auxiliary power unit

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 9-2350-256-12
2. TM 9-2350-256-10
3. TM 9-2350-256-20
4. TM 9-2350-256-24P-1
5. TM 9-2350-292-10
6. TM 9-2350-292-20
7. TM 9-2350-292-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2013: Maintain M88A2 smoke grenade launchers

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: To ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 3-1040-266-20&P
2. TM 9-2350-256-10
3. TM 9-2350-256-20
4. TM 9-2350-256-24P-1
5. TM 9-2350-292-10
6. TM 9-2350-292-20
7. TM 9-2350-292-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2014: Maintain M88A2 exhaust smoke generating system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-256-24P-1
4. TM 9-2350-292-10
5. TM 9-2350-292-20
6. TM 9-2350-292-24P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2015: Maintain AVL track and suspension system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2016: Maintain AVLB steering system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2017: Maintain AVLB exterior components

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, appropriate lifting devices, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24
9. MCO 4790.18

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2018: Maintain AVLB personnel heater

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 5-5420-202-10
2. TM 5-5420-202-20-1
3. TM 5-5420-202-20-2
4. TM 5-5420-202-20-3
5. TM 5-5420-202-20-4
6. TM 5-5420-202-24P
7. TM 5-5420-228-24
8. TM 9-2540-205-24&P

Administrative Instructions: See Administrative Notes, para 12020.

2146-ORGM-2019: Maintain AVLB smoke generator system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-202-24P
8. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include inspection, repair, and/or replacement of the following: smoke generator switch and guard, smoke generator switch indicator light and mounting bracket, smoke generator wiring harness, smoke generator fuel shut-off valve, smoke generator solenoid, smoke generator fuel hoses, lines, fittings, and smoke generator tee to turbo supercharger tube assembly.
-

2146-ORGM-2020: Maintain AVLB smoke grenade launcher

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, necessary tools and test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance/administrative records and procedures.

References:

1. TM 3-1040-266-20&P
2. TM 5-5420-202-10 and 24P
3. TM 5-5420-202-20-1
4. TM 5-5420-202-20-2
5. TM 5-5420-202-20-3
6. TM 5-5420-202-20-4
7. TM 5-5420-228-24

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include inspection, repair, and/or replacement of the following: smoke grenade power box, smoke grenade push-button unit, smoke grenade wiring harness assemblies, smoke grenade launcher, smoke grenade storage box, and also performing a function check on the smoke grenade launcher.
-

2146-ORGM-2021: Apply deep water fording kit to M88A2

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, deep water fording kit, and the references.

Standard: Prepare for amphibious operations per the references.

Performance Steps:

1. Conduct fording kit inventory.
2. Apply deep water fording kit to M88A2.
3. Operate vehicle as per instructions.
4. Remove deep water fording kit.
5. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2350-256-10
 2. TM 9-2350-256-24P-1
 3. TM 9-2350-292-10
 4. TM 9-2350-292-24P
 5. TM 9-238
-

FUNCTIONAL AREA: INTERMEDIATE MAINTENANCE

2146-INTM-2031: Repair AGT turbine engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 AGT 1500, appropriate lifting device, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2835-255-34
2. TM 9-2835-255-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: replacing unserviceable #1 bearing, removing and inspecting intermediate housing assembly, replacing unserviceable #12 and #4 annular ball bearing, removing and inspecting reduction gear box, replacing unserviceable #10 ball bearing, removing and inspecting shaft assembly and adapter, replacing unserviceable #5 bearing, removing and inspecting accessory gear box cover assembly.
-

2146-INTM-2032: Maintain M1A1 fuel system components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. TM 08953A-24P-1
2. TM 08953A-34/6-1
3. TM 08953A-34/6-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include: repairing unserviceable EMFS, fuel pump driveshaft, fuel pump, and rotary variable differential transformers (RVDTs).
-

2146-INTM-2033: Maintain M1A1 cooling system components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 power pack, appropriate lifting devices, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. LI 08953A-12
2. TM 08953A-34/6-1
3. TM 08953A-34/6-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: repairing or replacing unserviceable oil cooling fan angle drive unit assembly and unserviceable oil cooler fans and tube axle.
-

2146-INTM-2034: Maintain M1A1 hull electrical system components

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given M1A1 components, assigned tools test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. TM 08953A-34/6-1
2. TM 08953A-34/6-2
3. TM 9-2835-255-34
4. TM 9-4931-586-12-1&P
5. TM 9-4931-586-12-2&P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: repairing generator, driver's instrument panel, driver's master control panel, driver's alert panel, temperature controller, digital electronic control unit (DECU), hull power distribution box, hull network distribution box, DECU supplemental battery box, headlight assembly, wiring harness, and starter.
-

2146-INTM-2035: Repair M1A1 final drive assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given M1A1 final drive assembly, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. LI 08953A-12
2. TM 08953A-34/6-1
3. TM 08953A-34/6-2
4. TM 9-2520-276-34&P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: repairing output shaft assembly and final drive assembly.
-

2146-INTM-2036: Maintain M1A1 steering assembly

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 steering assembly, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. LI 08953A-12
2. TM 08953A-34/6-1
3. TM 08953A-34/6-2
4. TM 9-2520-276-34
5. TM 9-2520-276-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: replacing unserviceable access cover, switches and connectors, housing, identification plate, and unserviceable electrical wires.
-

2146-INTM-2037: Maintain M1A1 chassis accessories

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, an appropriate lifting device, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. LI 08953A-12
2. TM 08953A-24P-1

3. TM 08953A-34/6-1
4. TM 08953A-34/6-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include replacing or adjusting the following: unserviceable hull turret seal, race ring wiper seal, turret ring headless shoulder pin, bump stop bracket, ammunition doors, sound suppressors, and removing, repairing, and/or replacing the race ring assembly.

2146-INTM-2038: Maintain M1A1 fire suppression equipment components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given M1A1 fire suppression components, appropriate lifting devices, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. TM 08953A-24P-1
2. TM 08953A-34/6-1
3. TM 08953A-34/6-2

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include the following: replacing unserviceable fire extinguisher distribution tube assemblies and repairing unserviceable valve and bottle assembly.

2146-INTM-2039: Maintain M1A1 turret electrical system components

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given M1A1 turret electrical system components, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. TM 08953A-24P-2
2. TM 08953A-34-2-2
3. TM 9-1200-206-34-1
4. TM 9-1200-206-34-2
5. TM 9-1200-206-34-3
6. TM 9-1200-206-34P-2
7. TM 9-2350-264-34-2-1
8. TM 9-4931-586-12-1&P
9. TM 9-4931-586-12-2&P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include the following: repairing gunner's control assembly, commander's control assembly, gun/turret drive electronics unit, turret networks box assembly, loader's panel, tank commander's panel assembly, commander's weapon station control handle assembly, machine gun safety switch assembly, wiring harness, and commander's weapons station power control unit assembly.

2146-INTM-2040: Maintain M1A1 turret hydraulic system components

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete maintenance/administrative forms and records.

References:

1. LI 08953A-12
2. TM 08953A-24P-2
3. TM 08953A-34-2-2
4. TM 9-2350-264-34-2-1

Administrative Instructions:

1. See Administrative Notes, para 12020.

2. Steps include the following: repairing traversing mechanism assembly, elevating mechanism assembly, hand pump and hydraulic handle assembly, traverse servomechanism assembly, and elevation servomechanism assembly.

2146-INTM-2041: Maintain M1A1 turret assembly components

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, appropriate lifting devices, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance/administrative forms and records.

References:

1. LI 08953A-12
2. TM 08953A-24P-2 and A-34-2-2
3. TM 9-2350-264-34-2-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include the following: repairing turret lock assembly, turret race assembly, commander's weapon station azimuth drive gear box, commander's weapon station elevation manual drive, and turret ammunition doors.

2146-INTM-2042: Maintain M1A1 armament system components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given M1A1 armament system, appropriate lifting devices, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.

4. Complete required maintenance/administrative forms and records.

References:

1. LI 08953A-12
2. TM 08953A-24P-2
3. TM 08953A-34-2-2
4. TM 9-1000-202-14
5. TM 9-2350-264-34-2-1
6. TM 9-6650-235-13&P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: replacing unserviceable 120mm gun mount, replacing and/or adjusting gun trunnion resolver, replacing gunner's auxiliary sight front seal, and replacing recoil mechanism, and recoil mechanism wipers.
-

2146-INTM-2043: Maintain M1A1 mine clearing blade components

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 mine clearing blade, appropriate lifting devices, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 2590-10/1
2. TM 2590/23&P/2

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: replacing unserviceable motor housing, speed gear assembly, and motor assembly.
-

2146-INTM-2044: Maintain X11003B transmission

Initial Training Setting: FS

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1, X11003B transmission, appropriate lifting devices, assigned tools, test equipment, assistant(s), access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the references.
4. Complete required maintenance and/or administrative forms and records, when applicable.

References:

1. TM 9-2520-276-34
2. TM 9-2520-276-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: replacing unserviceable right brake apply shaft assembly, housing, and brake pad.
-

2146-INTM-2045: Maintain external auxiliary power unit (EAPU)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M1A1 external auxiliary power unit, appropriate lifting devices, assigned tools, test equipment, assistant(s), access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Operate M1A1.
2. Troubleshoot malfunctions.
3. Take corrective/remedial action per the reference.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-6115-542-24&P/1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: replacing unserviceable engine, repairing fuel, electrical, and/or air intake systems.
-

2146-INTM-2046: Troubleshoot M88A2

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2350-256-10
2. TM 9-2350-256-20
3. TM 9-2350-256-34-1
4. TM 9-2350-256-34-2
5. TM 9-2350-256-34P-1
6. TM 9-2350-292-10

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include inspection, and checking the following: fuel system, purge pump, electrical system, mechanical tachometer and speedometer, auxiliary power unit, bilge pump, personnel heater, and main hydraulic system.

2146-INTM-2047: Maintain M88A2 systems

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2350-256-20
2. TM 9-2350-256-24P-1
3. TM 9-2350-256-34-1
4. TM 9-2350-256-34-2
5. TM 9-2350-292-10
6. TM 9-2350-292-20
7. TM 9-2350-292-24P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include repair and/or replacement of the following: power plant, fuel tanks, electric fuel pump, purge pump, personnel heater, electrical components, hydraulic components, auxiliary power unit, adjust and load test main winch, hoist winch, and live boom, hoisting boom assembly, main winch and spade assembly, hydraulic subplate assembly, mechanical transmission and main hydraulic pump assembly, hoist winch assembly, hydraulic oil tank assembly, spade subplate and combination control valve assembly, flow regulator subplate assembly, smoke grenade launcher, and adjust and load test main winch, hoist winch, and live boom.

2146-INTM-2048: Maintain M88A2 turbosupercharger

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2350-256-34-1
2. TM 9-2350-256-34-2
3. TM 9-2350-256-34P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Steps include the following: disassembling turbosupercharger, inspecting and repairing turbosupercharger, assembling turbosupercharger, and testing/adjusting turbosupercharger.

2146-INTM-2049: Repair M88A2 engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AVDS-1790-2D engine, assigned tools, test equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2815-220-34

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: disassemble engine, inspect and repair engine, assemble engine, and test/adjust engine.
-

2146-INTM-2050: Repair M88A2 transmission

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an XT-1410-4 transmission, assigned tools, test equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2520-215-34

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include the following: disassemble transmission, inspect and repair transmission, assemble transmission, and test/adjust transmission.
-

2146-INTM-2051: Repair M88A2 output reduction unit

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an output reduction unit (ORU), assigned tools, test equipment, access to automated system with software, and the reference.

Standard: Ensure operational readiness per the reference.

Performance Steps:

1. Disassemble ORU.
2. Inspect/Repair ORU.
3. Assemble ORU.
4. Test/Adjust ORU.

References:

1. TM 9-2520-215-34

Administrative Instructions: See Administrative Notes, para 12020.

2146-INTM-2052: Maintain M88A2 fuel system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M88A2, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 9-2350-256-34-1
2. TM 9-2350-256-34-2
3. TM 9-2350-256-34P-1

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Parts or components include: fuel injectors, time injector pump, and Viking pump.
-

2146-INTM-2053: Maintain AVLB engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-24P
3. TM 5-5420-202-34
4. TM 5-5420-202-34P

Administrative Instructions: See Administrative Notes, para 12020.

2146-INTM-2054: Maintain AVLB fuel system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-10
3. TM 5-5420-202-24P
4. TM 5-5420-202-34
5. TM 5-5420-202-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Parts or components include: fuel injectors, timing injectors, and Viking pump.
-

2146-INTM-2055: Maintain AVLB electrical system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given and AVLB, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove, repair, and/or replace unserviceable parts or components.
3. Complete maintenance and/or administrative forms and records.

References:

1. TM 5-5420-202-10
2. TM 5-5420-202-24P
3. TM 5-5420-202-34
4. TM 5-5420-202-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Parts or components include: wiring harnesses, starter, and generator.

2146-INTM-2056: Maintain AVLB transmission

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB power plant, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-24P
3. TM 5-5420-202-34
4. TM 5-5420-202-34P

Administrative Instructions: See Administrative Notes, para 12020.

2146-INTM-2057: Maintain AVLB brake system components

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given AVLB brake system components, assigned tools, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-24P
3. TM 5-5420-202-34
4. TM 5-5420-202-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Parts or components include: brake master cylinder and brake slave cylinder.
-

2146-INTM-2058: Maintain AVLB suspension system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, suspension components, assigned tools, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LO 5-5420-202-12
2. TM 5-5420-202-24P
3. TM 5-5420-202-34
4. TM 5-5420-202-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Parts or components include: road wheel arm assembly, track support axle assembly, compensating idler arm assembly, and track adjusting link.

2146-INTM-2059: Maintain AVLB fire suppression system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 5-5420-202-24P
2. TM 5-5420-202-34
3. TM 5-5420-202-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
2. Parts include: fixed fire extinguishing cylinder.

2146-INTM-2060: Maintain AVLB launcher

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative records and forms.

References:

1. TM 5-5420-202-20
2. TM 5-5420-202-24P
3. TM 5-5420-202-34
4. TM 5-5420-202-34P

Administrative Instructions:

1. See Administrative Notes, para 12020.
 2. Steps include: inspection, repair, and/or replacement of the following: reservoir blower assembly, reservoir quadrant blower motor, accessories control box, tongue assembly, boom-outrigger, maintaining pump-clutch and valve bank, hydraulic cylinders, and reservoir.
-

2146-INTM-2061: Maintain AVLB final drive

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an AVLB final drive, appropriate lifting devices, assigned tools, test equipment, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Troubleshoot/Isolate discrepancies/unserviceable parts or components.
3. Remove, repair, and/or replace unserviceable parts or components.
4. Complete maintenance and/or administrative records and forms.

References:

1. TM 5-5420-202-20
2. TM 5-5420-202-24P
3. TM 5-5420-202-34
4. TM 5-5420-202-34P

Administrative Instructions: See Administrative Notes, para 12020.

2146-INTM-2062: Maintain intermediate tools and test equipment

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given applicable tools and test equipment, cleaning materials, access to automated system with software, and the references.

Standard: Ensure accountability and serviceability per the references.

Performance Steps:

1. Maintain tools.
2. Maintain special tools.
3. Maintain test equipment.
4. Maintain M1A1 tools.
5. Maintain M88A2 tools.

6. Maintain AVL B tools.
7. Inventory kits, sets, chests, and equipment as required and complete applicable forms and records.
8. Requisition required items and reconcile as required with supporting supply source.
9. Complete maintenance and/or administrative forms and records.

References:

1. MCO 4400.150
 2. MCO P4790.1
 3. MCO P4790.2
 4. SL-3-00456A
 5. SL-3-03533A
 6. SL-3-07769B
 7. SL-3-07928A
 8. SL-3-08940A
 9. SL-3-08953A
 10. SL-3-09561A
 11. SL-3-09590A
 12. SL-3-10025A
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FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2146-ADMN-2071: Manage maintenance functional areas

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given ground equipment maintenance publications and forms in a garrison or field environment, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure common shop operations are conducted to meet mission requirements through all echelons of maintenance per the references.

Performance Steps:

1. Ensure shop areas are designated, organized, and maintained.
2. Manage support and test equipment use, inventory, and maintenance.
3. Maintain electronic and paper-based technical publications libraries.
4. Coordinate supply support requirements.
5. Maintain preventive/corrective maintenance schedules.
6. Coordinate maintenance cycles and priority designators to ensure optimum equipment availability.
7. Ensure shop safety procedures are established and followed.
8. Ensure appropriate disposal of hazardous waste.
9. Conduct routine and unscheduled internal inspections, as required.

References:

1. ATCLASS II+ User's Manual
2. Applicable equipment technical manuals
3. MCO 4731.1
4. MCO 4733.1
5. MCO 4790.18
6. MCO 4855.10
7. MCO 5100.8
8. MCO P11262.2
9. MCO P4400.150
10. MCO P4790.1
11. MCO P4790.2
12. TM 4700-15/1
13. UM 4790-5

2146-ADMN-2072: Administer maintenance management programs

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given ground equipment maintenance publications and forms in a garrison or field environment, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure common shop operations are conducted to meet mission requirements through all echelons of maintenance per the references.

Performance Steps:

1. Review requirements outlined in the references.
2. Review existing maintenance management procedures for compliance.
3. Comply with maintenance management programs, as applicable: Modification Control Program, Warrant Program, Joint Oil Analysis Program, Inspect Repair Only As Necessary Program, WIR Program, Quality Control Program, Administrative Dead Line Program, Contact Team Program, Maintenance Stand-Down Program, Corrosion Prevention and Control Program, Hazardous, Communication Program, Tool Control and Calibration Programs, and Embarkation Program.
4. Correct any deficiencies.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. UM 4790-5

2146-ADMN-2073: Supervise maintenance management programs

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given the requirement, subordinate personnel, and the appropriate references.

Standard: Support mission requirements per the references.

Performance Steps:

1. Provide instruction and guidance on the completion of equipment records.
2. Provide instruction and guidance on performance of operator maintenance.
3. Provide instruction and guidance on maintenance safety program.
4. Maintain records of all training conducted.

References:

1. MCO 4731.1
2. MCO 4733.1
3. MCO 4790.18
4. MCO 5100.8
5. MCO P4790.1
6. MCO P4790.2
7. TM 4700-15/1
8. UM 4790-5

Administrative Instructions:

1. Maintenance and/or repairs limited to authorized echelon of maintenance.

2146-ADMN-2074: Perform MIMMS/ATLASS II+ systems administration

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given the requirement, access to automated system with software, and the references.

Standard: Support mission requirements per the references.

Performance Steps:

1. Perform mailbox maintenance.
2. Identify preventive maintenance requirements.
3. Develop preventive maintenance schedule.
4. Update job status.
5. Update man-hours.
6. Update priority.
7. Update meters.
8. Validate modification requirements.
9. Develop calibration schedule.
10. Develop pre-expended bin (PEB)/parts package.
11. Create adhoc report.
12. Analyze adhoc report.
13. Perform evacuation procedures.

References:

1. ATLASS II+ User's Manual
2. MCO P4790.2

2146-ADMN-2075: Conduct military occupational training program

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given subordinate ordnance maintenance personnel, an annual training plan, equipment and supplies, and the references.

Standard: Provide training sustainment and progression for subordinates per the references.

Performance Steps:

1. Review the annual training plan for training requirements.
2. Identify individual training requirements.
3. Develop a training schedule.
4. Apply training program policies and procedures.
5. Schedule support requirements, as needed.
6. Conduct ordnance maintenance training appropriate to unit size and

mission.

7. Participate in unit training evaluations and inspections.
8. Maintain records of all training conducted.

References:

1. Marine Corps Unit Training Management (UTM)
 2. MCO 1510.34
 3. MCO 1510.67
 4. MCO 1553.3
 5. MCRP 3-0A
 6. MCRP 3-0B
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CHAPTER 13

MOS 2147, LIGHT ARMORED VEHICLE REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	13000	13-1
EVENT CODING.....	13010	13-1
ADMINISTRATIVE NOTES.....	13020	13-1
INDEX OF INDIVIDUAL EVENTS BY LEVEL.....	13030	13-2
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	13040	13-4
1000 LEVEL INDIVIDUAL EVENTS.....	13050	13-6
2000 LEVEL INDIVIDUAL EVENTS.....	13060	13-21

MOS 2147, LIGHT ARMORED VEHICLE REPAIRER/TECHNICIAN INDIVIDUAL TRAINING

13000. PURPOSE

This chapter contains individual training events for the Light Armored Vehicle Repairer/Technician.

13010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2147, indicating that the event is for MOS 2147, Light Armored Vehicle Repairer/Technician.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Crew/Operator Maintenance	CWOP	2147-CWOP-xxxx
Organizational Maintenance	ORGM	2147-ORGM-xxxx
Intermediate Maintenance	INTM	2147-INTM-xxxx
Administrative Functions	ADMN	2147-ADMN-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains events in both levels.

13020. ADMINISTRATIVE NOTES

1. Maintenance and/or repairs are limited to authorized echelon of maintenance.

2. Material Safety Data Sheet (MSDS) must be on hand for all POLs, paint, and other hazardous materials used in preventive/corrective maintenance.

13030. INDEX OF INDIVIDUAL EVENTS BY LEVEL

Event Code	Event	Page
	1000-LEVEL	
2147-CWOP-1001	Perform LAV operator maintenance	13-6
2147-CWOP-1002	Operate LAV-25	13-7
2147-CWOP-1003	Operate LAV-anti-tank (AT)	13-7
2147-CWOP-1004	Operate LAV-recovery	13-8
2147-CWOP-1005	Operate LAV-M	13-9
2147-CWOP-1006	Maintain LAV tools and test equipment	13-9
2147-CWOP-1007	Perform LAV preventive maintenance checks and services (PMCS)	13-10
2147-ORGM-1021	Maintain LAV hull (all variants)	13-12
2147-ORGM-1022	Maintain LAV suspension system	13-12
2147-ORGM-1023	Maintain LAV engine	13-13
2147-ORGM-1024	Maintain LAV transmission	13-14
2147-ORGM-1025	Maintain LAV powerpack	13-14
2147-ORGM-1026	Maintain LAV steering system	13-15
2147-ORGM-1027	Maintain LAV cooling system	13-16
2147-ORGM-1028	Maintain LAV fuel system	13-16
2147-ORGM-1029	Maintain LAV hull electrical system	13-17
2147-ORGM-1030	Maintain LAV pneumatic system	13-18
2147-ORGM-1031	Maintain LAV hull hydraulic system	13-18
2147-ORGM-1032	Maintain LAV brake system	13-19
2147-ORGM-1033	Maintain LAV drive train	13-20
	2000-LEVEL	
2147-CWOP-2002	Operate LAV-command and control (C2)	13-21
2147-CWOP-2003	Operate LAV-mobile electronic warfare support system (MEWSS)	13-21
2147-CWOP-2004	Operate LAV-logistics (L)	13-22
2147-ORGM-2011	Maintain LAV fire suppression system	13-23
2147-ORGM-2012	Maintain LAV-25 turret assembly	13-23
2147-ORGM-2013	Maintain LAV-25 turret fire control hydraulics	13-24
2147-ORGM-2014	Maintain LAV-25 turret fire control electronics	13-25
2147-ORGM-2015	Maintain LAV-AT turret assembly	13-25
2147-ORGM-2016	Maintain LAV-AT turret fire control hydraulics	13-26
2147-ORGM-2017	Maintain LAV-AT turret fire control electronics	13-27
2147-ORGM-2018	Maintain LAV-AT turret sights, optics, and viewing devices	13-27
2147-ORGM-2019	Maintain LAV- AT recovery	13-28
2147-ORGM-2020	Maintain LAV-AT recovery electrical system	13-28
2147-ORGM-2021	Maintain LAV-AT recovery hydraulic system	13-29
2147-ORGM-2022	Maintain M242 25MM automatic chain gun	13-30
2147-ORGM-2023	Maintain LAV-AT turret sights, optics, and viewing devices	13-30
2147-ORGM-2024	Maintain LAV-AT turret controls and indicators	13-31
2147-ORGM-2025	Convert LAV-AT turret stow and low stow	13-32
2147-INTM-2041	Maintain LAV hull (all variants)	13-33
2147-INTM-2042	Maintain LAV suspension system	13-34

2147-INTM-2043	Maintain LAV engine	13-34
2147-INTM-2044	Maintain LAV transmission	13-35
2147-INTM-2045	Maintain LAV powerpack	13-36
2147-INTM-2046	Maintain LAV steering system	13-36
2147-INTM-2047	Maintain LAV hull electrical system	13-37
2147-INTM-2048	Maintain LAV hull pneumatic system	13-38
2147-INTM-2049	Maintain LAV hull hydraulic system	13-38
2147-INTM-2050	Maintain LAV brake system	13-39
2147-INTM-2051	Maintain LAV drive train	13-39
2147-INTM-2052	Maintain LAV fire suppression system	13-40
2147-INTM-2053	Maintain LAV-25 turret assembly	13-41
2147-INTM-2054	Maintain LAV-25 turret fire control hydraulics	13-41
2147-INTM-2055	Maintain LAV-25 turret fire control electronics	13-42
2147-INTM-2056	Maintain LAV-AT turret assembly	13-42
2147-INTM-2057	Maintain LAV-AT turret fire control hydraulics	13-43
2147-INTM-2058	Maintain LAV-AT turret fire control electronics	13-44
2147-INTM-2059	Maintain LAV-AT turret sights, optics, and viewing devices	13-44
2147-INTM-2060	Maintain LAV-recovery	13-45
2147-INTM-2061	Maintain LAV-recovery electrical system	13-45
2147-INTM-2062	Maintain LAV-recovery hydraulic system	13-46
2147-INTM-2063	Maintain M242 25MM automatic chain gun	13-47
2147-ADMN-2091	Manage maintenance functional areas	13-48
2147-ADMN-2092	Administer maintenance management programs	13-48
2147-ADMN-2093	Perform operator training	13-49
2147-ADMN-2094	Perform MIMMS/ATLASS II+ systems administration	13-50
2147-ADMN-2095	Manage military occupational specialty training program	13-50

13040. INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA

Event Code	Event	Page
	CREW/OPERATOR MAINTENANCE	
2147-CWOP-1001	Perform LAV operator maintenance	13-6
2147-CWOP-1002	Operate LAV-25	13-7
2147-CWOP-1003	Operate LAV-anti-tank (AT)	13-7
2147-CWOP-1004	Operate LAV-recovery	13-8
2147-CWOP-1005	Operate LAV-M	13-9
2147-CWOP-1006	Maintain LAV tools and test equipment	13-9
2147-CWOP-1007	Perform LAV preventive maintenance checks and services (PMCS)	13-10
2147-CWOP-2002	Operate LAV-command and control (C2)	13-21
2147-CWOP-2003	Operate LAV-mobile electronic warfare support system (MEWSS)	13-21
2147-CWOP-2004	Operate LAV-logistics (L)	13-22
	ORGANIZATIONAL MAINTENANCE	
2147-ORGM-1021	Maintain LAV hull (all variants)	13-12
2147-ORGM-1022	Maintain LAV suspension system	13-12
2147-ORGM-1023	Maintain LAV engine	13-13
2147-ORGM-1024	Maintain LAV transmission	13-14
2147-ORGM-1025	Maintain LAV powerpack	13-14
2147-ORGM-1026	Maintain LAV steering system	13-15
2147-ORGM-1027	Maintain LAV cooling system	13-16
2147-ORGM-1028	Maintain LAV fuel system	13-16
2147-ORGM-1029	Maintain LAV hull electrical system	13-17
2147-ORGM-1030	Maintain LAV pneumatic system	13-18
2147-ORGM-1031	Maintain LAV hull hydraulic system	13-18
2147-ORGM-1032	Maintain LAV brake system	13-19
2147-ORGM-1033	Maintain LAV drive train	13-20
2147-ORGM-2011	Maintain LAV fire suppression system	13-23
2147-ORGM-2012	Maintain LAV-25 turret assembly	13-23
2147-ORGM-2013	Maintain LAV-25 turret fire control hydraulics	13-24
2147-ORGM-2014	Maintain LAV-25 turret fire control electronics	13-25
2147-ORGM-2015	Maintain LAV-AT turret assembly	13-25
2147-ORGM-2016	Maintain LAV-AT turret fire control hydraulics	13-26
2147-ORGM-2017	Maintain LAV-AT turret fire control electronics	13-27
2147-ORGM-2018	Maintain LAV-AT turret sights, optics, and viewing devices	13-27
2147-ORGM-2019	Maintain LAV- AT recovery	13-28
2147-ORGM-2020	Maintain LAV-AT recovery electrical system	13-28
2147-ORGM-2021	Maintain LAV-AT recovery hydraulic system	13-29
2147-ORGM-2022	Maintain M242 25MM automatic chain gun	13-30
2147-ORGM-2023	Maintain LAV-AT turret sights, optics, and viewing devices	13-30
2147-ORGM-2024	Maintain LAV-AT turret controls and indicators	13-31
2147-ORGM-2025	Convert LAV-AT turret stow and low stow	13-32

	INTERMEDIATE MAINTENANCE	
2147-INTM-2041	Maintain LAV hull (all variants)	13-33
2147-INTM-2042	Maintain LAV suspension system	13-34
2147-INTM-2043	Maintain LAV engine	13-34
2147-INTM-2044	Maintain LAV transmission	13-35
2147-INTM-2045	Maintain LAV powerpack	13-36
2147-INTM-2046	Maintain LAV steering system	13-36
2147-INTM-2047	Maintain LAV hull electrical system	13-37
2147-INTM-2048	Maintain LAV hull pneumatic system	13-38
2147-INTM-2049	Maintain LAV hull hydraulic system	13-38
2147-INTM-2050	Maintain LAV brake system	13-39
2147-INTM-2051	Maintain LAV drive train	13-39
2147-INTM-2052	Maintain LAV fire suppression system	13-40
2147-INTM-2053	Maintain LAV-25 turret assembly	13-41
2147-INTM-2054	Maintain LAV-25 turret fire control hydraulics	13-41
2147-INTM-2055	Maintain LAV-25 turret fire control electronics	13-42
2147-INTM-2056	Maintain LAV-AT turret assembly	13-42
2147-INTM-2057	Maintain LAV-AT turret fire control hydraulics	13-43
2147-INTM-2058	Maintain LAV-AT turret fire control electronics	13-44
2147-INTM-2059	Maintain LAV-AT turret sights, optics, and viewing devices	13-44
2147-INTM-2060	Maintain LAV-recovery	13-45
2147-INTM-2061	Maintain LAV-recovery electrical system	13-45
2147-INTM-2062	Maintain LAV-recovery hydraulic system	13-46
2147-INTM-2063	Maintain M242 25MM automatic chain gun	13-47
	ADMINISTRATIVE FUNCTIONS	
2147-ADMN-2091	Manage maintenance functional areas	13-48
2147-ADMN-2092	Administer maintenance management programs	13-48
2147-ADMN-2093	Perform operator training	13-49
2147-ADMN-2094	Perform MIMMS/ATLASS II+ systems administration	13-50
2147-ADMN-2095	Manage military occupational specialty training program	13-50

13050. 1000-LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: CREW/OPERATOR MAINTENANCE

2147-CWOP-1001: Perform LAV operator maintenance

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform before operations checks.
2. Perform operator level troubleshooting.
3. Operate vehicle per instructions.
4. Perform during operations checks.
5. Perform after operations checks.
6. Record entries in ordnance vehicle logbook.

References:

1. LI 08594A-12/2A
2. LI 08650A-12A
3. LI 08651A-12A
4. LI 08652A-12/1C
5. LI 08654A-12
6. LI 08655A-12A
7. LI 09999A-12
8. TI 2320-15/55B
9. TM 08594A-10/2B
10. TM 08651A-10A
11. TM 08652A-10/2A
12. TM 08653A-10/1
13. TM 08654A-10A
14. TM 08655A-10A
15. TM 09999A-10/2
16. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Steps include inspection, removal, repair, and/or replacement of the following: communications equipment, driver's and commander's night vision periscopes, fluid levels, lubrication points, wheel drive assembly, service hull drain plug, air cleaner element, fuel strainer/separator, batteries, air reservoirs, brake system, weather protection grill cover, driver's windshield, driver's cover, tie down strap, smoke grenade launcher, LAV tires, collateral equipment, NBC system, maintenance equipment, and performing corrosion control.

2147-CWOP-1002: Operate LAV-25

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-25, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform before operations checks.
2. Operate LAV-25 turret and 25mm automatic chain gun.
3. Perform operator level troubleshooting.
4. Operate vehicle per instructions.
5. Perform during operations checks.
6. Perform after operations checks.
7. Operate associated SL-3 equipment.
8. Record entries in ordnance vehicle logbook.
9. Record entries in weapons record book.
10. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/1B
2. LI 08594A-12/2A
3. SL-3-08594A
4. TM 08594A-10-1C
5. TM 08594A-10/2B
6. TM 4700-15/1

Administrative Instructions:

1. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
2. Steps include inspecting: air intake and exhaust system, braking system, commander's night vision periscope, communications system, compressed air system, crew heater assembly, driver's night periscope, electrical system, bilge pump, engine, suspension assemblies, propeller drive assembly, steering system, transmission, wheel drive assemblies, and recovery equipment.
3. Vehicle not operated off-road or in simulated combat situations during formal school training.

2147-CWOP-1003: Operate LAV-anti-tank (AT)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-AT, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements to restore end item or component to operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Remove and repair or replace unserviceable parts or components.
3. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. LI 08652A-12/1B
3. LI 08652A-12/1C
4. TM 08594A-10/2B
5. TM 08652A-10/1A
6. TM 4700-15/1

Administrative Instructions:

1. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
2. Steps include inspection, removal, repair and/or replacement of the following: annunciator panel, compressed air and brake system, NBC system, power pack assembly, steering system, hydraulic system, electrical system, suspension system, drive train system, fuel system, cooling system, communications system, air intake system/exhaust system, fire suppression system, personal heater, and pneumatic system.

2147-CWOP-1004: Operate LAV-recovery

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Determine corrective maintenance requirements to restore end item or component to operational readiness per the references.

Performance Steps:

1. Perform before operations checks.
2. Perform operator level troubleshooting.
3. Perform limited technical inspection (LTI).
4. Operate LAV-R.
5. Ensure crane annual condition inspection is current prior to use.
6. Ensure not to exceed crane capacity.
7. Operate all auxiliary equipment.
8. Perform during operations checks.
9. Perform after operations checks.
10. Perform first echelon preventive maintenance checks and services.

11. Operate associated SL-3 equipment.
12. Properly record inventories.
13. Make appropriate entries in ordnance vehicle logbook.
14. Perform daily crane inspection.
15. Complete maintenance and/or administrative forms and records.

References:

1. LI 08651A-12A
2. MCO P11262.2
3. SL-3-08651A
4. TM 08651A-10A
5. TM 4700-15/1

Administrative Instructions: MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-CWOP-1005: Operate LAV-M

Initial Training Setting: FS

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-M, assigned tools and test equipment, assistance and supervision, access to automated system with software, and the references.

Standard: Determine corrective maintenance required to restore end item or component to operational readiness per the references.

Performance Steps:

1. Perform before operation checks.
2. Perform operator level troubleshooting.
3. Operate LAV-M.
4. Perform during operations checks.
5. Perform after operations checks.
6. Properly record inventories.
7. Make appropriate entries in ordnance vehicle logbook.
8. Complete maintenance and/or administrative forms and records.

References:

1. LI 08655A-12A
2. TM 08655A-10A
3. TM 4700-15/1

Administrative Instructions: MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-CWOP-1006: Maintain LAV tools and test equipment

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given applicable tools and test equipment, access to automated system and applicable software, and the references.

Standard: Ensure safety and availability to support mission requirements per the references.

Performance Steps:

1. Maintain all common, fabricated, TMDE, and special tools.
2. Inventory all common, fabricated, TMDE, and special tools.
3. Take appropriate action for all unserviceable and missing tools.

References:

1. MCO P4790.2
2. SL-3 08721A
3. SL-3 08723A
4. SL-3 08894A
5. SL-3 08895A
6. SL-3 08896A
7. SL-3 10262A
8. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Formal school training includes: introduction to and inventory of General Mechanic's Tool Box, familiarization with special tools, and test equipment used in the course of instruction.

2147-CWOP-1007: Perform LAV preventive maintenance checks and services (PMCS)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Minimize corrective maintenance, in accordance with the procedures and specifications listed per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Perform all required PMCS.
3. Perform corrosion control.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/1B
2. LI 08594A-12/2A
3. LI 08651A-12A
4. LI 08652A-12/1B
5. LI 08652A-12/1C
6. LI 08654A-12
7. LI 08655A-12A
8. LI 09999A-12
9. SL-4 08594A
10. SL-4 08650A
11. SL-4 08651A
12. SL-4 08652A
13. SL-4 08653A
14. SL-4 08654A
15. SL-4 08655A
16. SL-4 09999A
17. TM 08594A-20/3B/4A
18. TM 08650A-20B
19. TM 08651A-20B
20. TM 08652A-20/3B
21. TM 08652A-20/4A
22. TM 08652A-34/5A
23. TM 08653A-20/2
24. TM 08654A-20B
25. TM 08655A-20B
26. TM 08672A-20&P/1
27. TM 0999914/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 3. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METLs) and equipment on hand.
-

FUNCTIONAL AREA: ORGANIZATIONAL MAINTENANCE

2147-ORGM-1021: Maintain LAV hull (all variants)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system and applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. MCO P11262.2
2. SL-4 08594A
3. SL-4 08650A
4. SL-4 08651A
5. SL-4 08652A
6. SL-4 08653A
7. SL-4 08654A
8. SL-4 08655A
9. SL-4 09999A
10. TM 08594A-20/3B
11. TM 08594A-20/4A
12. TM 08650A-20B
13. TM 08651A-20B
14. TM 08652A-20/3B
15. TM 08652A-20/4A
16. TM 08653A-20
17. TM 08654A-20B
18. TM 08655A-20B
19. TM 08672A-20&P/1
20. TM 0999914/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-ORGM-1022 Maintain LAV suspension system

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system, applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/4A
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: characteristics, removal and installation of shocks, struts, and control arm assemblies.

2147-ORGM-1023: Maintain LAV engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system, applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Make adjustments to specifications.
5. Complete maintenance and/or administrative forms and records.

References:

1. TM 08594A-20/4A
2. TM 4700-15/1
3. TM 8A192C-34/PA

Administrative Instructions:

1. See Administrative Notes, para 13020.
3. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-ORGM-1024: Maintain LAV transmission

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system, applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Adjust modulator and complete road test.
5. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A, Stocklist
2. SL-4 8A191B/8B040B
3. TM 08594A-20/4A
4. TM 4700-15/1
5. TM 8A191B-34/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following:
characteristics and identification of components of the LAV transmission.

2147-ORGM-1025: Maintain LAV powerpack

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system, applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Identify discrepancies/unserviceable parts or components.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/4A

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-ORGM-1026: Maintain LAV steering system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system and applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Adjust components within specifications.
5. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/4A
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered include but are not limited to the following: characteristics and identification of components of the steering system, concept of operations, wheel alignment, and tire wear indicators.
-

2147-ORGM-1027: Maintain LAV cooling system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/4A
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following:
characteristics, identification of components and path of flow of the cooling system.

2147-ORGM-1028: Maintain LAV fuel system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. TI 10340-15/1C
3. TM 08594A-20/4A
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Steps include inspection, removal, and replacement of the following: power pack, mounting brackets, engine controls, and transmission controls.

2147-ORGM-1029: Maintain LAV hull electrical system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/3B
3. TM 08594A-20/4A
4. TM 08650A-20B
5. TM 08651A-20B
6. TM 08652A-20/3B
7. TM 08652A-20/4A
8. TM 08653A-20
9. TM 08654A-20B
10. TM 08655A-20B
11. TM 0999914/1
12. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

3. Items covered include but are not limited to the following: characteristics, identification of components and path of flow of the electrical system.

2147-ORGM-1030: Maintain LAV pneumatic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/3B
3. TM 08594A-20/4A
4. TM 08650A-20B
5. TM 08651A-20B
6. TM 08653A-20
7. TM 0999914/1
8. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: characteristics, identification of components, and path of flow of the pneumatic system.

2147-ORGM-1031: Maintain LAV hull hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. SL-4 08594A
3. TM 08594A-20/3B
4. TM 08594A-20/4A
5. TM 08650A-20B
6. TM 08651A-20B
7. TM 08652A-20/3B
8. TM 08653A-20
9. TM 0999914/1
10. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following:
characteristics, identification of components, and path of flow of the hydraulic system.

2147-ORGM-1032: Maintain LAV brake system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Adjust to specifications.
5. Bleed brake system.
6. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. SL-4 08594A
3. TM 08594A-20/4A
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Steps include inspection, removal, and replacement of the following: brake shoes and wheel cylinders.
-

2147-ORGM-1033: Maintain LAV drive train

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components to include marine drive system.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts and components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. SL-4 08594A
3. TM 08594A-20/4A
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered include but are not limited to the following: characteristics and identification of components of the LAV drive train, concept of operations, removal and installation of the transfer case, differentials, marine drive, and drive shafts.
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13060. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: CREW/OPERATOR MAINTENANCE

2147-CWOP-2002: Operate LAV-command and control (C2)

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-C2, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform before operation checks.
2. Perform operator level troubleshooting.
3. Operate LAV-C2.
4. Perform during operations checks.
5. Perform after operations checks.
6. Make appropriate entries in ordnance vehicle logbook.
7. Complete maintenance and/or administrative forms and records.

References:

1. LI 08650A-12A
2. TM 08650A-10
3. TM 4700-15/1

Administrative Instructions: MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-CWOP-2003: Operate LAV-mobile electronic warfare support system (MEWSS)

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-MEWSS, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform before operations checks.
2. Perform operator level troubleshooting.
3. Operate LAV-MEWSS.
4. Perform during operations checks.
5. Perform after operations checks.

6. Make appropriate entries in ordnance vehicle logbook.
7. Complete maintenance and/or administrative records and forms.

References:

1. LI 09999A-12
2. TM 09999A-10/2
3. TM 4700-15/1

Administrative Instructions:

1. Checks and troubleshooting include removal, and replacement of the following: turntable, roof hatch, and ammunition rack.

2147-CWOP-2004: Operate LAV-logistics (L)

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-L, required tools, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Perform before operation checks.
2. Perform operator level troubleshooting.
3. Operate LAV-L.
4. Perform during operations checks.
5. Perform after operations checks.
6. Perform first echelon preventive maintenance checks and services.
7. Operate associated SL-3 equipment.
8. Properly record inventories.
9. Make appropriate entries in ordnance vehicle logbook.
10. Complete maintenance and/or administrative forms and records.

References:

1. LI 08654A-12
2. SL-3-08654A
3. TM 08654A-10A
4. TM 4700-15/1

Administrative Instructions:

1. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
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FUNCTIONAL AREA: ORGANIZATIONAL MAINTENANCE

2147-ORGM-2011: Maintain LAV fire suppression system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Check for compliance of hydrostatic test date on storage tank.
3. Perform visual inspection on tanks to ensure continued usage.
4. Remove unserviceable parts or components.
5. Repair/Replace unserviceable parts or components.
6. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/4A
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
3. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
4. Items covered include but are not limited to the following: characteristics, identification of components, and inspection of the fire suppression system.

2147-ORGM-2012: Maintain LAV-25 turret assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.

2. Remove and install LAV-25 turret.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/1B,
2. SL-4 08594A
3. TM 08594A-20/3B
4. TM 08594A-20/4A
5. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-ORGM-2013: Maintain LAV-25 turret fire control hydraulics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/1B
2. SL-4 08594A
3. TM 08594A-10-1C
4. TM 08594A-20/3B
5. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered include but are not limited to the following: characteristics, identification of components, and path of flow.
-

2147-ORGM-2014: Maintain LAV-25 turret fire control electronics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/3B
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered include but are not limited to the following: characteristics, identification of components, and path of flow.
-

2147-ORGM-2015: Maintain LAV-AT turret assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Perform turret bleed down procedures when working on pressurized hydraulic system.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Remove LAV-AT turret.
6. Install LAV-AT turret.

7. Complete maintenance and/or administrative forms and records.

Initial Training Setting: FLC Sustainment: 12 Req By: Cpl

References:

1. LI 08652A-12/1B
2. SL-4 08652A
3. TM 08652A-10/1A
4. TM 08652A-20/3B
5. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-ORGM-2016: Maintain LAV-AT turret fire control hydraulics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Perform turret bleed down procedures when working on pressurized hydraulic system.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance and/or administrative forms and records.

References:

1. LI 08652A-12/1B
2. SL-4 08652A
3. TM 08652A-20/3B
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered include but are not limited to the following: characteristics, identification of components, path of flow, and removal and installation of components within authorized echelon of maintenance.
-

2147-ORGM-2017: Maintain LAV-AT turret fire control electronics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08652A-12/1B
2. SL-4 08652A
3. TM 08652A-20/3B
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following:
characteristics, identification of components, path of flow, and removal and installation of components within authorized echelon of maintenance.

2147-ORGM-2018: Maintain LAV-AT turret sights, optics, and viewing devices

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Perform turret bleed down procedures when working on pressurized hydraulic system.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.

5. Complete maintenance and/or administrative forms and records.

References:

1. LI 08652A-12/1B
2. SL-4 08652A
3. TM 08652A-20/3B
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following:
characteristics, identification of components, concept of operations, and removal and installation of components within authorized echelon of maintenance.

2147-ORGM-2019: Maintain LAV-Recovery

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. SL-4 08651A
3. TM 08651A-20B
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-ORGM-2020: Maintain LAV-Recovery electrical system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. SL-4 08651A
3. TM 08651A-20B
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: characteristics, identification of components, path of flow, and removal and installation of components within authorized echelon of maintenance.

2147-ORGM-2021: Maintain LAV-Recovery hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08651A-12A
2. MCO P11262.2
3. SL-4 08594A

4. SL-4 08651A
5. TM 08651A-10A
6. TM 08651A-20B
7. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following:
characteristics, identification of components, path of flow, and removal and installation of components within authorized echelon of maintenance.

2147-ORGM-2022: Maintain M242 25MM automatic chain gun

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an M242 25mm automatic chain gun in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. TM 08594A-10-1C
2. TM 08672A-20&P/1
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following:
characteristics, identification of components, and removal and installation of components within authorized echelon of maintenance.

2147-ORGM-2023: Maintain LAV-AT turret sights, optics, and viewing devices

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-AT turret in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Per the references and within the authorized echelon of maintenance.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Identify unserviceable parts and components.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance and/or administrative forms and records.

References:

1. TM 8H161B-20
2. TM 8H161B-34

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Steps include inspection, removal, and replacement of the following: night sight and associated equipment, daysight/tracker associated equipment, image transfer assembly, and purging the image transfer assembly.
-

2147-ORGM-2024: Maintain LAV-AT turret controls and indicators

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-AT turret in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the reference.

Standard: Per the reference and within the authorized echelon of maintenance.

Performance Steps:

1. Perform limited technical inspection (LTI).
2. Identify unserviceable parts and components.
3. Remove unserviceable parts or components.
4. Repair/Replace unserviceable parts or components.
5. Complete maintenance and/or administrative forms and records.

References:

1. TM 08652A-20/3B

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Steps include inspection, removal, and replacement of the following: turret controls and indicators.
-

2147-ORGM-2025: Convert LAV-AT turret stow and low stow

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV-AT turret in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Per the references.

Performance Steps:

1. Convert stow to load stow.
2. Convert load stow to stow.
3. Complete maintenance and/or administrative forms and records.

References:

1. TM 08652A-20/3B
2. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 13020.

FUNCTIONAL AREA: INTERMEDIATE MAINTENANCE

2147-INTM-2041: Maintain LAV hull (all variants)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, with applicable equipment, assistance and supervision, access to automated system and applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. LI 08651A-12A
3. LI 08652A-12/1C
4. LI 08654A-12
5. LI 08655A-12A
6. LI 09999A-12
7. SL-4 08594A
8. SL-4 08650A
9. SL-4 08651A
10. SL-4 08652A
11. SL-4 08653A
12. SL-4 08654A
13. SL-4 08655A
14. SL-4 09999A
15. TM 08594A-20/4A
16. TM 08594A-34/9
17. TM 08650A-20B
18. TM 08650A-34
19. TM 08651A-20B
20. TM 08651A-34
21. TM 08652A-20/4A
22. TM 08652A-34/6A
23. TM 08653A-20
24. TM 08653A-34/3
25. TM 08654A-20B
26. TM 08655A-20B
27. TM 08655A-34
28. TM 09999A-14

Administrative Instructions:

1. See Administrative Notes, para 13020.

2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-INTM-2042: Maintain LAV suspension system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-34/9
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered may include but are not limited to the following: repair of planetary gear and control arm.
-

2147-INTM-2043: Maintain LAV engine

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.

2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. TM 4700-15/1
3. TM 8A192C-34/PA

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: repair of blower seals, turbocharger seals, tune-up, separation of engine from transmission, and cylinder head inspection and replacement.

2147-INTM-2044: Maintain LAV transmission

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. SL-4 8A191B/8B040B
3. TM 4700-15/1
4. TM 8A191B-34/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered include but are not limited to the following: separation of transmission from engine.
-

2147-INTM-2045: Maintain LAV powerpack

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-20/4A
3. TM 08594A-34/9
4. TM 4700-15/1
5. TM 8A191B-34/1
6. TM 8A192C-34/PA

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: removal and separation of engine and transmission.

2147-INTM-2046: Maintain LAV steering system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-34/9
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
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2147-INTM-2047: Maintain LAV hull electrical system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Identify unserviceable parts and components.
2. Remove unserviceable parts or components.
3. Repair/Replace unserviceable parts or components.
4. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. SL-4 08650A
3. SL-4 08651A
4. SL-4 08652A
5. SL-4 08653A
6. SL-4 08654A
7. SL-4 08655A
8. SL-4 09999A
9. TM 08594A-34/9
10. TM 08650A-34
11. TM 08651A-34
12. TM 08652A-34/6A
13. TM 08653A-34/3
14. TM 08654A-34
15. TM 08655A-34
16. TM 09999A-14
17. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

3. Items covered include but are not limited to the following: reading schematics.

2147-INTM-2048: Maintain LAV hull pneumatic system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-34/9
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-INTM-2049: Maintain LAV hull hydraulic system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-34/9
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-INTM-2050: Maintain LAV break system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. SL-4 08594A
3. TM 08594A-34/9
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-INTM-2051: Maintain LAV drive train

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts.
3. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/2A
2. SL-4 08594A
3. TM 08594A-34/9
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: replace differential, transfer case; marine drive, and propeller drive seals.

2147-INTM-2052: Maintain LAV fire suppression system

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-34/9
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
-

2147-INTM-2053: Maintain LAV-25 turret assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/1B
2. SL-4 08594A
3. TM 08594A-34/8
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-INTM-2054: Maintain LAV-25 turret fire control hydraulics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Make adjustments to specifications.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08594A-12/1B
2. SL-4 08594A
3. TM 08594A-34/8

4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: repair of hydraulic power supply, manual elevation hand crank, elevation actuator, and traverse drive assembly.

2147-INTM-2055: Maintain LAV-25 turret fire control electronics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08594A
2. TM 08594A-34/8
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: repair of the PDA, CDA, and hand control assemblies.

2147-INTM-2056: Maintain LAV-AT turret assembly

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08652A
2. TM 08652A-34/5A
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
-

2147-INTM-2057: Maintain LAV-AT turret fire control hydraulics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Perform turret bleed down procedures when working on pressurized hydraulic system.
4. Complete maintenance and/or administrative forms and records.

References:

1. LI 08652A-12/1B
2. SL-4 08652A
3. TM 08652A-20/3B
4. TM 08652A-34/5A
5. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

3. Items covered include but are not limited to the following: repair of hydraulic power supply, azimuth drive, and accumulator assemblies.

2147-INTM-2058: Maintain LAV-AT turret fire control electronics

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. LI 08652A-12/1B
2. SL-4 08652A
3. TM 08652A-20/3B and 34/5A
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: RAD adjustment, repair of gunner's control panel, and microswitch replacement and adjustment.

2147-INTM-2059: Maintain LAV-AT turret sights, optics, and viewing devices

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08652A
2. TM 08652A-34/3
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: ITA removal and installation.

2147-INTM-2060: Maintain LAV-recovery

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08651A
2. TM 08594A-34/9
3. TM 08651A-34
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.

2147-INTM-2061: Maintain LAV-recovery electrical system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. SL-4 08651A
2. TM 08594A-34/9
3. TM 08651A-34
4. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
3. Items covered include but are not limited to the following: reading schematics.

2147-INTM-2062: Maintain LAV-recovery hydraulic system

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an LAV in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. LI 08651A-12A
2. SL-4 08651A
3. TM 08594A-34/9
4. TM 08651A-34
5. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
 3. Items covered include but are not limited to the following: winch adjustment, troubleshooting, remove and install crane, and reading schematics.
-

2147-INTM-2063: Maintain M242 25MM automatic chain gun

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given an M242 25mm automatic chain gun in a garrison or field environment, required tools, applicable equipment, assistance and supervision, access to automated system with software, and the references.

Standard: Ensure operational readiness per the references.

Performance Steps:

1. Troubleshoot to identify unserviceable parts and components.
2. Identify, remove, repair, and replace unserviceable parts/components.
3. Complete maintenance and/or administrative forms and records.

References:

1. TM 08594A-10-1C
2. TM 08672A-30&P
3. TM 4700-15/1

Administrative Instructions:

1. See Administrative Notes, para 13020.
 2. MOS 2147 Formal Training, MOJT, and Sustainment Training should encompass all LAV variants, systems, and components as required to support Mission-Essential Task Lists (METL) and equipment on hand.
-

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2147-ADMN-2091: Manage maintenance functional areas

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given ground equipment maintenance publications and forms in a garrison or field environment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure common shop operations are conducted to meet mission requirements through all echelons of maintenance per the references.

Performance Steps:

1. Ensure shop areas are designated, organized, and maintained.
2. Manage support and test equipment use, inventory, and maintenance.
3. Ensure maintenance of the technical publications library.
4. Coordinate supply support requirements.
5. Maintain preventive/corrective maintenance schedules.
6. Coordinate maintenance cycles and priority designators to ensure optimum equipment availability.
7. Ensure shop safety procedures are established and followed.
8. Ensure appropriate disposal of hazardous waste.
9. Conduct routine and unscheduled internal inspections, as required.

References:

1. ATCLASS II+ User's Manual
 2. Applicable equipment technical manuals
 3. MCO 4731.1
 4. MCO 4733.1
 5. MCO 4790.18
 6. MCO 4855.10
 7. MCO 5100.8
 8. MCO P11262.2
 9. MCO P4400.150
 10. MCO P4790.1
 11. MCO P4790.2
 12. TM 4700-15/1
 13. UM 4790-5
-

2147-ADMN-2092: Administer maintenance management programs

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given ground equipment maintenance publications and forms in a garrison or field environment, assistance and supervision, access to automated system with applicable software, and the references.

Standard: Ensure common shop operations are conducted to meet mission requirements through all echelons of maintenance per the references.

Performance Steps:

1. Review requirements outlined in the references.
2. Review existing maintenance management procedures for compliance.
3. Ensure compliance with maintenance management programs as applicable: Modification Control Program, Warranty Program, Joint Oil Analysis Program, Inspect Only As Necessary Program, WIR Program, Quality Control Program, Administrative Dead Line Program, Contact Team Program, Maintenance Stand-Down Program, Corrosion Prevention and Control Program, Hazardous Communication Program, Tool Control and Calibration Programs, Embarkation Program.
4. Ensure actions are completed to correct any deficiencies.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. UM 4790-5

Administrative Instructions: See Administrative Note #1, para 13020.

2147-ADMN-2093: Perform operator training

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given the requirement, subordinate personnel, and the appropriate references.

Standard: Support mission requirements per the references.

Performance Steps:

1. Provide instruction and guidance on the completion of equipment records.
2. Provide instruction and guidance on performance of operator maintenance.
3. Provide instruction and guidance on maintenance safety program.
4. Maintain records of all training conducted.

References:

1. MCO 4731.1
2. MCO 4733.1
3. MCO 4790.18
4. MCO 5100.8
5. MCO P4790.1
6. MCO P4790.2
7. TM 4700-15/1
8. UM 4790-5

Administrative Instructions: See Administrative Note #1, para 13020.

2147-ADMN-2094: Perform MIMMS/ATLASS II++ systems administration \

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given the requirement, access to automated system with applicable software, and the references.

Standard: Support mission requirements per the references.

Performance Steps:

1. Perform mailbox maintenance.
2. Identify preventive maintenance requirements.
3. Develop preventive maintenance schedule.
4. Update job status.
5. Update man-hours.
6. Update priority.
7. Update meters.
8. Identify and validate modification requirements.
9. Develop calibration schedule.
10. Develop pre-expended bin (PEB)/parts package.
11. Create adhoc report.
12. Analyze adhoc report.
13. Perform evacuation procedures.

References:

1. ATLASS II+ User's Manual
 2. MCO P4790.2
-

2147-ADMN-2095: Manage military occupational specialty training program

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given subordinate ordnance maintenance personnel, an annual training plan, necessary equipment and supplies, and the references.

Standard: Provide appropriate training sustainment and progression for subordinates per the references.

Performance Steps:

1. Review the annual training plan for training requirements.
2. Identify individual training requirements.
3. Develop a training schedule.
4. Apply training program policies and procedures.
5. Schedule support requirements, as needed.
6. Conduct ordnance maintenance training appropriate to unit size and mission.
7. Participate in unit training evaluations and inspections.
8. Maintain records of all training conducted.

References:

1. Marine Corps Unit Training Management (UTM) (www.tecom.usmc.mil/utm)
2. MCO 1510.34
3. MCO 1510.67
4. MCO 1553.3
5. MCRP 3-0A
6. MCRP 3-0B

Administrative Instructions: See Administrative Note #1, para 13020.

CHAPTER 14

MOS 2149, ORDNANCE VEHICLE MAINTENANCE CHIEF INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	14000	14-1
EVENT CODING.....	14010	14-1
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	14020	14-2
2000 LEVEL INDIVIDUAL EVENTS.....	14030	14-3

MOS 2149, ORDNANCE VEHICLE MAINTENANCE CHIEF INDIVIDUAL TRAINING

14000. PURPOSE

This chapter contains individual training events for the Ordnance Vehicle Maintenance Chief.

14010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2149, indicating that the event is for MOS 2149, Ordnance Vehicle Maintenance Chief.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Administrative Functions	ADMN	2149-ADMN-xxxx
Technical Functions	TECH	2149-TECH-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains events in the 2000 level only.

14020. INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA

Event Code	Event	Page
	ADMINISTRATIVE FUNCTIONS	
2149-ADMN-2001	Establish maintenance management programs for ground ordnance equipment	14-3
2149-ADMN-2002	Supervise ground ordnance maintenance resources	14-3
2149-ADMN-2003	Supervise publications and directives in support of ground ordnance equipment programs	14-4
2149-ADMN-2004	Manage ground ordnance equipment programs	14-5
2149-ADMN-2005	Supervise support equipment programs for ground ordnance equipment	14-5
2149-ADMN-2006	Supervise supply support procedures for ground ordnance equipment	14-6
2149-ADMN-2007	Supervise ground ordnance maintenance	14-7
2149-ADMN-2008	Supervise ground ordnance maintenance facilities	14-7
2149-ADMN-2009	Supervise maintenance productions schedules for ground ordnance equipment	14-8
2149-ADMN-2010	Supervise preventive maintenance checks and services (PMCS) for ground ordnance equipment	14-9
2149-ADMN-2011	Supervise corrective maintenance (CM) programs for ground ordnance equipment	14-10
2149-ADMN-2012	Supervise modification programs for ground ordnance equipment	14-10
2149-ADMN-2013	Monitor environmental compliance for ground ordnance equipment	14-11
2149-ADMN-2014	Supervise shop safety program for ground ordnance equipment	14-12
2149-ADMN-2015	Supervise embarkation of ground ordnance equipment	14-12
2149-ADMN-2016	Supervise maintenance shop information	14-13
2149-ADMN-2017	Prepare routine correspondence, messages, and reports for ground ordnance equipment	14-14
2149-ADMN-2018	Coordinate load test procedures for ground ordnance equipment	14-14
2149-ADMN-2019	Supervise physical security of ground ordnance equipment	14-15
2149-ADMN-2020	Assist in the fielding of ground ordnance equipment	14-16
2149-ADMN-2021	Identify the phases in the acquisition process	14-16
	TECHNICAL FUNCTIONS	
2149-TECH-2031	Supervise recovery operations of ordnance vehicles	14-18
2149-TECH-2032	Supervise licensing program for ordnance recovery vehicles	14-18
2149-TECH-2033	Supervise the Joint Oil Analysis Program (JOAP)	14-19
2149-TECH-2034	Provide technical supervision in the repair of the family of ordnance vehicles	14-19

14030. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2149-ADMN-2001: Establish maintenance management programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure mission requirements are completed per the references.

Performance Steps:

1. Identify mission requirements.
2. Analyze capabilities.
3. Determine resource requirements.
4. Analyze external requirements.
5. Develop procedures to comply with functional areas of maintenance management.
6. Implement maintenance management programs.
7. Supervise maintenance management programs.

References:

1. MCO P4400.150
2. MCO P4790.2
3. MCO P1200.7
4. Local Policies and Procedures
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2002: Supervise ground ordnance maintenance resources

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, personnel, maintenance facilities, and a budget.

Standard: Ensure mission requirements and equipment readiness are maintained per the references.

Performance Steps:

1. Identify available resources.
2. Consolidate time into usable blocks.
3. Assist the Maintenance Officer/MMO in conducting T/O&E reviews.
4. Identify personnel strengths and weaknesses to match them against mission requirements.
5. Ensure that repair parts and maintenance related supplies are requisitioned when required.
6. Ensure accountability of repair parts and maintenance related supplies.
7. Identify all tools, chests, sets, and TMDE equipment are on hand to support mission requirements.
8. Identify facilities required to support the mission.
9. Identify publication requirements to support the mission.
10. Identify funding requirements to support the mission.

References:

1. MCO P5600.31
2. MCO P4790.2
3. MCWP 4-11
4. MCDP-4
5. TM 4700-15/1
6. MCO P4400.150
7. MCO 4733.1
8. MCO P5215.1
9. MCO P5215.17
10. MCO 4710.8
11. Table of Organization & Equipment (T/O&E)
12. Local Policies and Procedures

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2003: Supervise publications and directives in support of ground ordnance equipment programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure maintenance libraries and mission requirements are maintained per the references.

Performance Steps:

1. Determine publication requirements.
2. Register requirements.
3. Establish control procedures.
4. Maintain the publication control system.
5. Conduct internal reviews.

References:

1. Table of Organization & Equipment (T/O&E)
2. MCO P5215.1
3. SL 1-2/3
4. UM-MCPDS
5. Local Policies and Procedures
6. UM-PLMS
7. MCO 5600.31
8. MCO P5215.17
9. MCO P4790.2
10. Special allowance list

ADMINISTRATIVE INSTRUCTIONS: Automated systems include CD-ROM and web based information.

2149-ADMN-2004: Manage ground ordnance maintenance MOS training programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and personnel records.

Standard: Ensure maintenance MOS training is conducted per the references.

Performance Steps:

1. Identify requirements.
2. Identify training resources.
3. Establish the MOS training sustainment matrix.
4. Schedule annual MOS training.
5. Develop lesson plans.
6. Conduct training.
7. Document training.
8. Conduct internal reviews of training plan.

References:

1. MCO 1510 Series
2. MCO P4790.2
3. MCO 1553.3
4. MCRP 3-OA
5. MCRP 3-OB
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2005: Supervise support equipment programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment is utilized per the mission requirements and references.

Performance Steps:

1. Identify requirements.
2. Establish control procedures.
3. Supervise tool control procedures.
4. Supervise calibration procedures.
5. Supervise preventive maintenance for support equipment.
6. Supervise corrective maintenance for support equipment.
7. Conduct internal reviews.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. MCO 4733.1
4. MCO P4400.150
5. TI 4733-15/1
6. TI 4733-15/11
7. Current MARADMINs
8. Applicable Technical Information
9. Table of Organization & Equipment (T/O&E)
10. Special Allowance List

Administrative Instructions: The term support equipment includes but is not limited to tool sets, kits, chests, hoists, jacks, stands, and TMDE (calibrations equipment). Automated systems include CD-ROM and web based information.

2149-ADMN-2006: Supervise supply support procedures for ground ordnance equipment

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure supply support programs are employed per the mission requirements and references.

Performance Steps:

1. Identify supply requirements.
2. Supervise the accountability for all repair parts.
3. Supervise validation procedures.

4. Supervise reconciliation procedures.
5. Conduct internal reviews.

References:

1. MCO P4400.82
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 8300.1
5. MCO 4340.1
6. MCO P4400.150
7. UM 4400-124
8. Table Of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM, and web based information.

2149-ADMN-2007: Supervise ground ordnance maintenance facilities

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and facilities.

Standard: Ensure maintenance facilities are utilized per the mission requirements and references.

Performance Steps:

1. Identify facility requirements.
2. Develop maintenance flow plan.
3. Organize facilities to support mission.
4. Evaluate Operational Risk Management (ORM).
5. Maintain facilities.

References:

1. MCO P4790.1
2. MCO P4790.2
3. Applicable Technical Information
4. MCO P11262.2
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM, and web based information.

2149-ADMN-2008: Supervise maintenance production schedules for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, automated reports, equipment records, and maintenance resources.

Standard: Ensure maintenance production is accomplished per the mission requirements available resources and references.

Performance Steps:

1. Determine available resources.
2. Evaluate workload.
3. Consolidate time into usable blocks.
4. Determine production capability.
5. Prioritize workload.
6. Assign work.
7. Ensure quality control procedures.

References:

1. MCO P4790.1 and .2
2. Local Policies and Procedures
3. Applicable Technical Information
4. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2009: Supervise maintenance related programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure maintenance related programs are accomplished per the mission requirements and references.

Performance Steps:

1. Identify mission requirements.
2. Supervise Product Quality Deficiency Report (PQDR) program.
3. Supervise Corrosion Prevention and Control (CPAC) program.
4. Supervise a Quality Control (QC) program.
5. Supervise unit level execution of Depot Level Maintenance programs.
6. Supervise execution of Contract Logistic Support (CLS).
7. Supervise execution of equipment warranties.
8. Supervise demilitarization procedures.
9. Supervise Military Awards/Incentives Program.

References:

1. MCO P4790.2
2. MCO 4733.1

3. MCO 4855.10
4. MCO P4790.1
5. MCO 4105.2
6. MCO 1650.17
7. MCO P4790.3
8. MCO 3000.11C
9. MCO 4790.18
10. MCO 8300.1
11. TM 4795-12
12. TM 4795-34
13. TM 4750-15/1
14. DOD 4160.21-M-1
15. Applicable Unit Logistics Support Summary (ULSS)
16. Applicable Technical Information
17. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2010: Supervise preventive maintenance checks and services (PMCS) for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure preventive maintenance checks and services are accomplished per the mission requirements and references.

Performance Steps:

1. Identify PMCS requirements.
2. Identify cyclic maintenance requirements.
3. Identify special maintenance requirements.
4. Identify deferred maintenance requirements.
5. Develop PMCS schedule.
6. Supervise documentation of PMCS program.
7. Supervise Quality Control (QC) procedures for PMCS program.

References:

1. MCO P4790.1
2. MCO P4790.2
3. TM 4700-15/1
4. Applicable Technical Information
5. Local Policies and Procedures
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2011: Supervise corrective maintenance (CM) programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure corrective maintenance is accomplished per the mission requirements and references.

Performance Steps:

1. Identify corrective maintenance requirements.
2. Supervise the prioritization of corrective maintenance requirements.
3. Ensure all applicable maintenance procedures are followed.
4. Ensure all applicable reporting procedures are followed.
5. Monitor progress of corrective maintenance.
6. Ensure quality control procedures are followed.
7. Maintain liaison with external maintenance activities.

References:

1. MCO P4790.1
2. MCO P4790.2
3. TM 4700-15/1
4. Applicable Technical Information
5. Applicable Unit Logistics Support Summary (ULSS)
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2012: Supervise modification programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment modifications are accomplished per the mission requirements and references.

Performance Steps:

1. Identify equipment modification requirements.
2. Verify equipment configurations.
3. Supervise modifications.
4. Supervise documentation of modifications.

References:

1. MCO P4790.1
2. MCO P4790.2
3. TM 4700-15/1
4. Applicable Modification Instructions (MI's)
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM, and web based information.

2149-ADMN-2013: Monitor environmental compliance for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure environmental compliance procedures are observed per the mission requirements and references.

Performance Steps:

1. Determine environmental compliance requirements.
2. Monitor unit environmental compliance with unit representative.
3. Implement corrective actions.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO 5100.8
5. MCO 5104.3
6. MCO P4400.150
7. MCO 4450.12
8. TB MED 524
9. NAVSEATM 50420-AA-RAD-010
10. Current ALMARs
11. Current MARADMINs
12. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of environmental compliance should include but is not limited to the following areas of concern: radiation safety, Hazardous Material (HAZMAT) handling procedures, Depleted Uranium (DU) hazards, Nuclear Regulatory Commission (NRC) Licenses, and Material Safety Data Sheets (MSDS). Automated systems include CD-ROM, and web based information.

2149-ADMN-2014: Supervise shop safety program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure shop safety practices are observed per the mission requirements and references.

Performance Steps:

1. Determine safety program requirements.
2. Monitor compliance with shop safety procedures.
3. Implement corrective actions.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P5090.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. MCO 4450.12
9. TB MED 524
10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current MARADMINs
13. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of safety encompasses all aspects of ground safety, which includes but is not limited to the following areas of concern: laser safety, Occupational Safety & Health Administration (OSHA) regulations & policies, Material Safety Data Sheets (MSDS), battery rooms, Personal Protective Equipment (PPE), heat conditions, fire protection, medical surveillance programs, and industrial hygiene. Automated systems include CD-ROM, and web based information.

2149-ADMN-2015: Supervise embarkation of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment is embarked per the mission requirements and references.

Performance Steps:

1. Determine embarkation requirements.
2. Ensure that requirements are documented.
3. Supervise coordination with embarkation personnel.
4. Supervise the preparation of equipment for embark.

References:

1. MSE/Unit embarkation
2. Table of Organization & Equipment (T/O&E)
3. MCWP 4-1
4. NAVMC 2706
5. MCO 4030.16
6. MCO 4030.19
7. MCO 4030.25
8. MCO 4030.33
9. MCO 4030.36
10. MCO 4110.2
11. MCO 4400.16
12. MCO P4400.150
13. MCO P4600.14
14. MCO P4600.19
15. MCO 4600.25
16. MCO 4600.30
17. MCO 4610.15
18. MCO P4610.19

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-ADMN-2016: Supervise maintenance shop information requirements for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment information is completed per the mission requirements and references.

Performance Steps:

1. Identify maintenance information requirements.
2. Identify required output reports.
3. Supervise completion of maintenance resource reports.
4. Analyze performance indicators of reports.
5. Conduct trend analysis of reports.
6. Recommend corrective action.
7. Review message traffic for information concerning ground ordnance equipment.

References:

1. MCO P4790.2
2. Current MARADMINs
3. Applicable Technical Information
4. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/ Automated Information Systems (MIMMS/AIS), Asset Tracking Logistics and Supply System II+ (ATLASS II+), and Defense Messaging System (DMS). Automated systems include CD-ROM, and web based information.

2149-ADMN-2017: Prepare routine correspondence, messages, and reports for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, and the information required to publish.

Standard: Ensure correspondence, messages, and reports are completed per the mission requirements and references.

Performance Steps:

1. Draft correspondence as required.
2. Draft messages as required.
3. Draft reports as required.
4. Supervise maintenance of files.

References:

1. SECNAVINST 5216.5
2. Local Policies and Procedures
3. MCO P1070.12
4. MCWP 3-1
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM, and web based information.

2149-ADMN-2018: Coordinate load test procedures for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, and equipment records.

Standard: Ensure load testing is conducted, certified, and maintained per the mission requirements and references.

Performance Steps:

1. Identify load-testing requirements.
2. Establish a load test certification schedule.
3. Assist certifying authority.
4. Supervise completion of administrative functions.

References:

1. MCO P11240.106
2. MCO P11262.2
3. NAVFAC P307
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM, and web based information.

2149-ADMN-2019: Supervise physical security of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, equipment records, and ground ordnance equipment storage facilities.

Standard: Ensure ground ordnance equipment is safeguarded from theft/tampering per the mission requirements and references.

Performance Steps:

1. Identify security requirements.
2. Review security procedures.
3. Evaluate security compliance of ordnance storage facilities.
4. Assist in Arms, Ammunition & Explosives (AA&E) screenings.
5. Ensure personnel are security trained.
6. Ensure accountability of AA&E.

References:

1. MCO P5530.14
2. OPNAVINST 5530.13
3. OPNAVINST 5530.14
4. MCO 5500.6
5. MCO P4400.150
6. MCO 4340.1
7. MCO 8300.1
8. Current ALMARs

9. Current MARADMINs
10. Applicable Technical Information
11. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM, and web based information.

2149-ADMN-2020: Assist in the fielding of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment fielding is supported and accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment fielding requirements.
2. Review fielding documents.
3. Assist in fielding plan.
4. Coordinate placement of equipment into service.
5. Monitor completion of administrative functions.

References:

1. MCO P4790.2
2. Applicable Technical Information
3. Applicable Unit Logistics Support Summary (ULSS)
4. MCO 4420.15
5. MCO 8300.1
6. MCO 4400.82
7. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM, and web based information.

2149-ADMN-2021: Identify the phases in the acquisition process

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure the equipment fielding is supported and accomplished per the mission requirements and references.

Performance Steps:

1. Identify lifecycle milestones in the acquisition process.
2. Identify types of acquisition.

References:

1. TM 4420-15/1
2. MCO 4105 Series
3. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2149-TECH-2031: Supervise recovery operations of ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and equipment.

Standard: Ensure the recovery of vehicle is safely accomplished per the mission requirements and references.

Performance Steps:

1. Conduct recovery training.
2. Identify recovery requirements.
3. Conduct Battle Damage Assessment and Repair (BDAR).
4. Conduct ORM for recovery.
5. Supervise recovery operations.
6. Coordinate external recovery support.
7. Monitor completion of administrative functions.

References:

1. MCO P4790.2
2. TI 8005-25/12
3. FMFRP 4-34
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-TECH-2032: Supervise licensing program for ordnance recovery vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), personnel records, and equipment.

Standard: Ensure the required personnel are trained and licensed per the mission requirements and references.

Performance Steps:

1. Identify licensing requirements.
2. Review licensing program.
3. Coordinate licensing training.
4. Ensure training is documented.

5. Coordinate ORM.

References:

1. MCO 8400.6
2. FM 21-305 Manual for the Wheeled Vehicle Driver
3. Applicable Technical Information
4. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

2149-TECH-2033: Supervise the Joint Oil Analysis Program (JOAP) for ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and [NAVMC 10561](#).

Standard: Ensure the oil analysis is accomplished per the mission requirements and references.

Performance Steps:

1. Determine equipment requiring oil analysis.
2. Analyze results.
3. Determine corrective action.
4. Monitor administrative functions.

References:

1. MCO 4790.2
2. TI 4731-14/1C
3. MCO 4731.1
4. TM 4700-15/1
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Administrative function includes records and reports. Automated systems include CD-ROM and web based information.

2149-TECH-2034: Provide technical supervision in the repair for the family of ordnance vehicles

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), personnel, personnel records, equipment, equipment records, and maintenance facilities.

Standard: Ensure maintenance of ordnance vehicles is accomplished per the mission requirements and references.

Performance Steps:

1. Identify requirements.
2. Identify deficiencies.
3. Identify maintenance solutions.
4. Supervise maintenance.
5. Supervise maintenance personnel.
6. Ensure safety of personnel.
7. Supervise completion of administrative functions.

References:

1. MCO P4790.2
2. TI 8005-25/12
3. TM 4700.15/1
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: Automated systems include CD-ROM and web based information.

CHAPTER 15

MOS 2161, MACHINIST INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	15000	15-1
EVENT CODING.....	15010	15-1
ADMINISTRATIVE NOTES.....	15020	15-1
INDEX OF INDIVIDUAL EVENTS BY LEVEL.....	15020	15-2
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	15030	15-3
1000 LEVEL INDIVIDUAL EVENTS.....	15040	15-4
2000 LEVEL INDIVIDUAL EVENTS.....	15050	15-20

MOS 2161, MACHINIST INDIVIDUAL TRAINING

15000. PURPOSE

This chapter contains individual training events for the Machinist.

15010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2161, indicating that the event is for MOS 2161, Machinist.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Machine Operations	MACH	2161-MACH-xxxx
Equipment Repair and Fabrication	FABR	2161-FABR-xxxx
Administrative Functions	ADMN	2161-ADMN-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains events in both levels.

15020. ADMINISTRATIVE NOTES

1. Maintenance and/or repairs are limited to authorized echelon of maintenance.
2. Automated systems include CD-ROM, web based information and all applications of electronic media.
3. OPNAV 4790.2, Naval Aviation Maintenance Program will be utilized by Marine Corps air wing units.

15030. INDEX OF INDIVIDUAL EVENTS BY LEVEL

Event Code	Event	Page
	1000 LEVEL	
2161-MACH-1001	Operate band saw	15-4
2161-MACH-1002	Operate bench grinder	15-4
2161-MACH-1003	Operate horizontal band saw (cutoff saw)	15-5
2161-MACH-1004	Operate cylindrical grinder	15-5
2161-MACH-1005	Operate drill press	15-6
2161-MACH-1009	Operate hydraulic press	15-7
2161-MACH-1011	Set up lathe	15-7
2161-MACH-1012	Perform threading operations	15-8
2161-MACH-1013	Perform lathe operations	15-8
2161-MACH-1014	Perform lathe turning operations	15-9
2161-MACH-1015	Operate milling machine	15-10
2161-MACH-1017	Operate hardness tester	15-10
2161-MACH-1020	Operate lathe milling attachment/versa mill	15-11
2161-MACH-1021	Operate machinist's van	15-11
2161-MACH-1022	Operate digital read out (DRO)	15-12
2161-MACH-1023	Perform knurling operations	15-13
2161-FABR-1041	Extract broken bolt, tap, drill bit, or stud	15-14
2161-FABR-1042	Extract thread inserts	15-14
2161-FABR-1043	Prepare shop drawing	15-15
2161-FABR-1044	Weld band saw blade	15-15
2161-FABR-1045	Sharpen turning tool bits	15-16
2161-FABR-1046	Sharpen twist drill bits	15-17
2161-ADMN-1061	Follow basic shop procedures	15-18
2161-ADMN-1062	Follow basic maintenance procedures	15-18
	2000 LEVEL	
2161-MACH-2001	Operate drill grinding machine	15-20
2161-MACH-2002	Operate electro-disintegrating machine	15-20
2161-MACH-2003	Operate honing machine	15-21
2161-MACH-2004	Operate lapping machine	15-21
2161-MACH-2005	Perform cutting operation with oxyacetylene welding equipment	15-22
2161-MACH-2006	Operate surface grinder	15-23
2161-MACH-2007	Operate valve grinding machine	15-23
2161-MACH-2008	Perform corrective maintenance (CM) on machinist's equipment	15-24
2161-FABR-2010	Perform heat treating operation	15-25
2161-FABR-2011	Sharpen milling cutters	15-25
2161-ADMN-2021	Implement maintenance management training program	15-27
2161-ADMN-2022	Implement supply support program	15-27
2161-ADMN-2023	Maintain machine shop functional areas	15-28
2161-ADMN-2024	Maintain maintenance transaction reports	15-28
2161-ADMN-2025	Operate computer numerical control (CNC) equipment	15-29

15040. INDEX OF INDIVIDUAL EVENTS FUNCTIONAL AREA

Event Code	Event	Page
	MACHINE OPERATIONS	
2161-MACH-1001	Operate band saw	15-4
2161-MACH-1002	Operate bench grinder	15-4
2161-MACH-1003	Operate horizontal band saw (cutoff saw)	15-5
2161-MACH-1004	Operate cylindrical grinder	15-5
2161-MACH-1005	Operate drill press	15-6
2161-MACH-1009	Operate hydraulic press	15-7
2161-MACH-1011	Set up lathe	15-7
2161-MACH-1012	Perform threading operations	15-8
2161-MACH-1013	Perform lathe operations	15-8
2161-MACH-1014	Perform lathe turning operations	15-9
2161-MACH-1015	Operate milling machine	15-10
2161-MACH-1017	Operate hardness tester	15-10
2161-MACH-1020	Operate lathe milling attachment/versa mill	15-11
2161-MACH-1021	Operate machinist's van	15-11
2161-MACH-1022	Operate digital read out (DRO)	15-12
2161-MACH-1023	Perform knurling operations	15-13
2161-MACH-2001	Operate drill grinding machine	15-20
2161-MACH-2002	Operate electro-disintegrating machine	15-20
2161-MACH-2003	Operate honing machine	15-21
2161-MACH-2004	Operate lapping machine	15-21
2161-MACH-2005	Perform cutting operation with oxyacetylene welding equipment	15-22
2161-MACH-2006	Operate surface grinder	15-23
2161-MACH-2007	Operate valve grinding machine	15-23
2161-MACH-2008	Perform corrective maintenance (CM) on machinist's equipment	15-24
	EQUIPMENT REPAIR AND FABRICATION	
2161-FABR-1041	Extract broken bolt, tap, drill bit, or stud	15-14
2161-FABR-1042	Extract thread inserts	15-14
2161-FABR-1043	Prepare shop drawing	15-15
2161-FABR-1044	Weld band saw blade	15-15
2161-FABR-1045	Sharpen turning tool bits	15-16
2161-FABR-1046	Sharpen twist drill bits	15-17
2161-FABR-2010	Perform heat treating operation	15-25
2161-FABR-2011	Sharpen milling cutters	15-25
	ADMINISTRATIVE FUNCTIONS	
2161-ADMN-1061	Follow basic shop procedures	15-18
2161-ADMN-1062	Follow basic maintenance procedures	15-18
2161-ADMN-2021	Implement maintenance management training program	15-27
2161-ADMN-2022	Implement supply support program	15-27
2161-ADMN-2023	Maintain machine shop functional areas	15-28
2161-ADMN-2024	Maintain maintenance transaction reports	15-28
2161-ADMN-2025	Operate computer numerical control (CNC) equipment	15-29

15050. 1000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: MACHINE OPERATIONS

2161-MACH-1001: Operate a band saw

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a machinist tool box, a lay out die, a piece of raw stock, special measuring tools, a shop drawing, safety equipment, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the band saw is set up for filing, cutting, polishing, and contour cutting, per the Machinist's Handbook, and references.

Performance Steps:

1. Lay out work.
2. Perform preventive maintenance check on band saw.
3. Set up band saw for operation.
4. Cut stock to dimensions given on shop drawing.
5. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1002: Operate a bench grinder

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given machinist's toolbox, material required for grinding, shop drawing, coolant, safety equipment, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the bench grinder will be operated safely per the references.

Performance Steps:

1. Lay out work.
2. Perform preventive maintenance check on grinder.
3. Start bench grinder.

4. Dress grinding wheel.
5. Grind material to size per shop drawing.
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1003: Operate a horizontal band saw (cutoff saw)

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given machinist's tool box, stock, safety equipment, lay out die, shop drawing, manufacturer/operator's manual, machinist's handbook, measuring tools, automated systems with internet access, and the current authorized technical information.

Standard: Ensure cutoff operations are completed accurately and safely per the references.

Performance Steps:

1. Lay out work.
2. Perform preventive maintenance check on saw.
3. Set up saw for specific cut.
4. Perform the cutting operation.
5. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1004: Operate cylindrical grinder

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given versa mill, machinist's tool box, shop drawing, safety equipment, and automated systems with internet access, and the current authorized technical information.

Standard: Ensure the project will be produced accurately and safely per the references.

Performance Steps:

1. Lay out work.
2. Perform preventive maintenance check on grinder.
3. Set up machine.
4. Grind stock per shop drawing.
5. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1005: Operate a drill press

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given drill press, machinist's toolbox, lay-out equipment, stock, safety equipment, shop drawing, appropriate bits, measuring tools, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the drill press is operated safely and per the specifications and references.

Performance Steps:

1. Lay out stock.
2. Perform preventive maintenance check on drilling machine and bits.
3. Set up drill.
4. Perform drilling operation per shop drawings.
5. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1009: Operate hydraulic press

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a hydraulic press, material or equipment requiring pressing in or out, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the pressing operations are completed safely and project is completed according to design, specifications, and the references.

Performance Steps:

1. Set up hydraulic press.
2. Perform pressing operation.
3. Conduct Preventive Maintenance Checks and Services (PMCS).
4. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TM 4700-15/1

Administrative Instructions: See Administrative Notes 2 & 3, para 15020.

2161-MACH-1011: Set up lathe

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given specific task, lathe, accessories, machinist's toolbox, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the lathe is operational and the correct method of holding material in lathe is determined using available accessories per the references.

Performance Steps:

1. Determine type of operation that must be performed.
2. Determine type of holding device or devices required to perform operation.
3. Perform required lathe procedures.
4. Conduct Preventive Maintenance Checks and Services (PMCS).
5. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook

2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1012: Perform threading operations

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given lathe with attachments, requirement to cut internal or external threads, measuring equipment, material to thread, alternate holding device, machinist's toolbox, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the device cuts internal or external threads to include V sharp, acme, square cuts on material to required specifications using thread per inch or revolutions per inch method.

Performance Steps:

1. Determine specifications for type of thread to be cut.
2. Set up lathe, holding devices, accessories and material to be threaded.
3. Perform external threading with lathe.
4. Perform external threading with die.
5. Perform internal threading with lathe.
6. Perform internal threading with tap.
7. Measure thread to ensure correct tolerances.
8. Perform Preventive Maintenance Checks and Services (PMCS).
9. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1013: Perform lathe operations

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given lathe with attachments, drill bits, reamers, material requiring one or more of these operations, machinist's toolbox, specifications, automated systems with internet access, and the current authorized technical information.

Standard: Ensure drilling, boring, and reaming operations on material using lathe with attachments to required specifications.

Performance Steps:

1. Determine type of drilling, boring and/or reaming operation required.
2. Set up lathe with required attachments.
3. Perform drilling, boring, and/or reaming operations.
4. Ensure finished product meets specifications.
5. Conduct Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1014: Perform lathe turning operations

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given lathe with attachments, measuring equipment, machinist's toolbox, material requiring turning, automated systems with internet access, and the current authorized technical information.

Standard: Ensure lathe turning operations (including straight taper, facing, grooving, radii, parting, filing and polishing and using lathe with attachments) are to required specifications, per the references.

Performance Steps:

1. Determine type of turning operation required.
2. Set up lathe and accessories for required operations.
3. Perform turning operation.
4. Ensure turned material meets required specifications.
5. Conduct Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1015: Operate milling machine

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given milling machine with attachments and accessories, machinist's toolbox, automated systems with internet access, and the current authorized technical information.

Standard: Ensure milling operations are performed to required specifications per the references.

Performance Steps:

1. Determine type of operation required.
2. Set up milling machine to perform required operation.
3. Perform milling operation or series of operations.
4. Ensure milled material meets required specifications.
5. Conduct Preventive Maintenance Checks and services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1017: Operate hardness tester

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given hardness tester, specifications, material to be tested, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the material is tested as specified per the references.

Performance Steps:

1. Determine type of test to be conducted.
2. Set up machine and material to be heated.
3. Conduct hardness test.
4. Document results of test.

5. Perform Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1020: Operate lathe milling attachment/versa mill

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given lathe milling attachment/versa mill, material to be milled, cutters, lathe with accessories, machinist's toolbox, measuring instruments, specifications, automated systems with internet access, and the current authorized technical information.

Standard: Ensure milling operations are accurate and performed per specifications and the references.

Performance Steps:

1. Determine type of milling operation required.
2. Set up lathe with milling attachment for desired operation.
3. Perform required milling operations.
4. Ensure material milled conforms to required specifications.
5. Conduct Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1021: Operate machinist's van

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given machine shop van, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the machinist's van is ready to perform required machinist operations per the references.

Performance Steps:

1. Set up machinist's van.
2. Inventory machinist's van.
3. Perform machinist's van Preventive Maintenance Checks and Services.
4. Perform machining operations.
5. Complete maintenance and/or administrative forms and records.

References:

1. Applicable SL-3s
2. Machinist's Handbook
3. Operator's Manual
4. SC 4940-95-CL-B02
5. TM 9-4940-559-14&P
6. TM 4700-15/1
7. UM 4400-124
8. OPNAV 4790.2

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1022: Operate a digital read out (DRO)

Initial Training Setting: FS

Sustainment Interval: 12

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a machine with x, y, and z digital read out, automated systems with internet access, the current authorized technical information, and machinist tool box.

Standard: Ensure operations are performed to required specifications per the references.

Performance Steps:

1. Zero display.
2. Use an edge finder/cutting tool to set absolute zero.
3. Set absolute zero using tool offset.
4. Change the position of absolute zero.

References:

1. Machinist's Handbook
2. Operator's Manual

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-1023: Perform knurling operations

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given lathe with attachments, measuring equipment, material to knurl, machinist's toolbox, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the device knurls on material to required specifications per the references.

Performance Steps:

1. Determine specifications for type of knurl.
2. Set up lathe, accessories, and material to be knurled.
3. Execute knurling operations.
4. Measure knurled material to ensure correct tolerances.
5. Perform Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

FUNCTIONAL AREA: EQUIPMENT REPAIR AND FABRICATION

2161-FABR-1041: Extract broken bolt, tap, drill bit, or stud

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given broken bolt, tap, drill bit or stud, drill, easy outs, stud extractor, electro-disintegrating machine, oxyacetylene welding torch, machinist's tool box, automated systems with internet access, and the current authorized technical information.

Standard: Ensure broken machine part is extracted correctly per the references.

Performance Steps:

1. Determine what must be extracted.
2. Determine appropriate extraction procedure.
3. Extract broken part.
4. Recondition threaded hole as required.
5. Perform Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. OPNAV 4790.2
3. TM 4700-15/1
4. TC 9-524
5. Operator's Manual

Administrative Instructions: See Administrative Notes, para 15020.

2161-FABR-1042: Extract thread inserts

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given equipment with damaged threads, insert kit, machinist's toolbox, safety equipment, automated systems with internet access, and the current authorized technical information.

Standard: Ensure inserts are properly inserted, extracted and replaced.

Performance Steps:

1. Read directions on insert kit.
2. Insert/Extract thread insert.
3. Perform Preventive Maintenance Checks and Services (PMCS).

4. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. OPNAV 4790.2
3. TC 9-524
4. TM 4700-15/1

Administrative Instructions:

1. Types of thread kits include: helicoil, keensert, and roseanne.
2. Instructions are provided with each thread insert repair kit.
3. See Administrative Notes 2 & 3, para 15020.

2161-FABR-1043: Prepare shop drawing

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given specifications of items to be drawn, drafting equipment, automated systems with internet access, and the current authorized technical information.

Standard: Ensure drawing is prepared to specification per the references.

Performance Steps:

1. Gather necessary materials for drawing.
2. Complete drawing, ensuring accuracy and compliance with requested specifications.
3. Complete maintenance and or administrative forms and records.

References:

1. Machinist's Handbook
2. FM 5-553
3. OPNAV 4790.2
4. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-FABR-1044: Weld bandsaw blade

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given band saw with welder, spool or band saw blade, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the blade is cut and welded to specifications per the references.

Performance Steps:

1. Cut blade to appropriate length.
2. Grind ends to match.
3. Place on welder blade holders.
4. Weld and anneal blades.
5. Grind off excess weld.
6. Check on blade thickness gage.
7. Fit on band saw.
8. Perform cutting operations.
9. Perform Preventive Maintenance Checks and Services (PMCS).
10. Complete maintenance and/or administrative forms and records.

References:

1. Operator's Manual
2. OPNAV 4790.2
3. TM 4700-15/1
4. TM 9-3419-227-10

Administrative Instructions: See Administrative Notes, para 15020.

2161-FABR-1045: Sharpen turning tool bits

Initial Training Setting: FS

Sustainment Interval: 3

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given bench grinder, coolant, tool bit, safety equipment, and automated systems with internet access, and the current authorized technical information.

Standard: Ensure bits are sharpened to required shape per the specifications and references.

Performance Steps:

1. Perform preventive maintenance check on bench grinder.
2. Grind turning tool bit to required specification.
3. Quench tool bit when needed.
4. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-FABR-1046: Sharpen twist drill bits

Initial Training Setting: FS

Sustainment Interval: 3

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given bench grinder, tool bit, drill gage, safety equipment, automated systems with internet access, and the current authorized technical information.

Standard: Ensure bits are sharpened to specification and references.

Performance Steps:

1. Perform preventive maintenance check on bench grinder.
2. Sharpen drill bit to desired angle.
3. Check finished bit with gauge.
4. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. OPNAV 4790.2
3. TM 4700-15/1
4. TC 9-524

Administrative Instructions: See Administrative Notes, para 15020.

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2161-ADMN-1061: Follow basic shop procedures

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given common tools, power tools, precision measuring tools, automated systems with internet access, and the current authorized technical information.

Standard: Maintain assigned work area in the accomplishment of maintenance assignments per the references.

Performance Steps:

1. Organize tools and equipment within work area.
2. Follow instructions for care of tools.
3. Observe safety regulations.
4. Observe hazardous material regulations.

References:

1. Material safety data sheets for hazardous materials
2. 29 CFR 1910.1200
3. DOD INST 6050.5
4. FM 9-243
5. MCO P5090.2
6. TM 10209-10/1

Administrative Instructions: To comply with 29 CFR 1910.1200 (Hazard Communication), employees who may be exposed to a hazardous material must; (1) have been provided information and training prior to their initial assignment to work with the hazardous chemical and whenever the hazard changes; and (2) have access to label information and material safety data sheets to understand the hazard(s); and (3) to identify the necessary personal protective equipment and special precautions to use while working with the chemical.

2161-ADMN-1062: Follow basic maintenance procedures

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given equipment repair records and forms, automated systems with internet access, and the current authorized technical information.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Utilize required publications and directives.
2. Adhere to Modification Instructions.
3. Adhere to Calibration procedures.
4. Complete maintenance management forms needed to document work.

References:

1. MCO 4790.2
 2. TM 4700-15/1
 3. UM 4790-5
 4. UM 4400-124
 5. MCO P5215.17
 6. NAVMC 2761 Catalog of Publications
 7. SL-1-2
 8. SL-1-3
 9. TI 4733-15/1
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15060. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: EQUIPMENT REPAIR AND FABRICATION

2161-MACH-2001: Operate a drill grinding machine

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a drill grinding machine, drill bits to be sharpened, safety equipment, machinist's tool box, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the drill grinding machine is operated safely and per the machinist's handbook and references.

Performance Steps:

1. Set up drill grinding machine.
2. Grind drill bits.
3. Conduct Preventive Maintenance Checks and Services (PMCS).
4. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-2002: Operate electro disintegrating machine

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given electro disintegrating machine accessories, machinist's tool box, piece containing broken bolt, hardened drill bit, automated systems with internet access, and the current authorized technical information.

Standard: Ensure electro disintegrating machine is operated safely per the references.

Performance Steps:

1. Perform preventive maintenance check on machine.
2. Remove broken parts as required.
3. Complete maintenance and/or administrative forms and records.

References:

1. Operator's Manual
2. OPNAV 4790.2
3. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-2003: Operate honing machine

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given a honing machine, accessories, items to be honed, safety equipment, machinist's tool box, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the honing operations are conducted safely per the references.

Performance Steps:

1. Perform preventive maintenance checks on honing machine.
2. Set up machine for operation.
3. Perform honing operations.
4. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes 2 & 3, para 15020.

2161-MACH-2004: Operate lapping machine

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given lapping machine, lapping compound, parts requiring lapping, in a garrison or field environment, automated systems with internet access, and the current authorized technical information.

Standard: Ensure lap designated parts are lapped properly after determining proper grit of lapping compound per the references.

Performance Steps:

1. Select proper grit of lapping compound.
2. Set up machine.
3. Perform lapping operation.
4. Check accuracy of lapping operation.
5. Clean up lapped material and machine.
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions:

1. This training standard only applies to Marines working in a shop that is equipped with the machine and is therefore not a requirement for all Marines serving in the 2161 MOS.
2. See Administrative Notes 2 & 3, para 15020.

2161-MACH-2005: Perform cutting operation with oxyacetylene welding equipment

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given oxyacetylene welding equipment, material to be cut, automated systems with internet access, and the current authorized technical information.

Standard: Ensure cutting operations are performed safely and accurately per the references.

Performance Steps:

1. Lay out work.
2. Set up equipment.
3. Perform cutting operation.
4. Conduct Preventive Maintenance Checks and Services (PMCS).
5. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-237
5. TC 9-524
6. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-2006: Operate surface grinder

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given surface grinder, material to be ground, test equipment, safety equipment, machinist's toolbox, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the material is ground to specifications per the references.

Performance Steps:

1. Determine speed and feed to be used.
2. Set up machine for grinding operation.
3. Perform grinding operation.
4. Check ground material for proper tolerances.
5. Conduct Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

2161-MACH-2007: Operate valve grinding machine

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given valve grinding machine, valve, safety equipment, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the valve will be ground to specifications per the references.

Performance Steps:

1. Perform preventive maintenance check on machine.
2. Set machine for required angle.
3. Perform valve-grinding operation.
4. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook

2. Operator's Manual
3. OPNAV 4790.2
4. TC 9-524
5. TM 4700-15/1

Administrative Instructions: See Administrative Notes 2 & 3, para 15020.

2161-MACH-2008: Perform corrective maintenance (CM) on machinist's equipment

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given machinist's equipment requiring corrected maintenance, automated systems with internet access, and the current authorized technical information.

Standard: Ensure machinist's equipment assigned to repair facility is maintained in a serviceable condition per the references.

Performance Steps:

1. Identify defect.
2. Determine warranty status.
3. Determine shop capability to perform corrective maintenance.
4. Determine facility maintenance capabilities and time line.
5. Identify external source of corrective maintenance.
6. Complete maintenance and/or administrative forms and records.

References:

1. Operator's Manual
2. OPNAV 4790.2
3. Machinist's Handbook
4. MCO P4790.2
5. TM 4700-15/1
6. TM 9-243

Administrative Instructions:

1. See Administrative Notes, para 15020.
 2. The chain of command is the final authority for the outsourcing of all corrective maintenance.
-

FUNCTIONAL AREA: FABRICATION

2161-FABR-2010: Perform heat treating operation

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given metal object, heat source, quenching and annealing material, specifications from hardness tester, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the operation is accomplished to specifications required and verify results using hardness tester per the references.

Performance Steps:

1. Determine material to be used for type of heat-treating to be performed.
2. Apply proper heat to metal treated.
3. Quench or anneal metal to specifications.
4. Verify hardness of treated metal by performing hardness test.
5. Perform Preventive Maintenance Checks and Services (PMCS).
6. Complete maintenance and/or administrative forms and records.

References:

1. Machinist's Handbook
2. OPNAV 4790.2
3. TM 4700-15/1
4. TM 9-237
5. Operator's Manual

Administrative Instructions: See Administrative Notes, para 15020.

2161-FABR-2011: Sharpen milling cutters

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given a cutter grinder, accessories, cutters to be sharpened, safety equipment, machinist's toolbox, automated systems with internet access, and the current authorized technical information.

Standard: Ensure cutters are sharpened to specification per the references.

Performance Steps:

1. Perform preventive maintenance check on cutter grinder.
2. Set up grinder for cutter to be ground.
3. Grind cutter to required specification.

4. Complete maintenance and/or administrative forms and records.

References:

1. Operator's Manual
2. Machinist's Handbook
3. OPNAV 4790.2
4. TM 4700-15/1

Administrative Instructions: See Administrative Notes, para 15020.

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2161-ADMN-2021: Implement maintenance management training program

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given the assignment for training, training materials, automated systems with internet access, and the current authorized technical information.

Standard: Ensure training is accomplished per requirements and references.

Performance Steps:

1. Implement maintenance management administrative training.
2. Schedule technical maintenance training.

References:

1. Applicable equipment technical manuals
2. MCO P4790.2
3. OPNAV 4790.2
4. Local Standard Operation Procedures (SOP)

Administrative Instructions: See Administrative Notes 2 & 3, para 15020.

2161-ADMN-2022: Implement supply support program

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: Cpl, Sgt, SSgt, GySgt

Condition: Given supply forms and reports, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the program is accomplished accurately per the references.

Performance Steps:

1. Prepare a supply request for submission to supply.
2. Conduct supply reconciliation.

References:

1. MCO 4400.16
2. MCO P4450.12
3. MCO P4790.2
4. OPNAV 4790.2

Administrative Instructions: See Administrative Notes, para 15020.

2161-ADMN-2023: Maintain machine shop functional areas

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given a Machine Shop, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the Functional Areas are maintained per the references.

Performance Steps:

1. Maintain Calibrations Control Program.
2. Maintain Tool Control Program.
3. Maintain Desktop Procedures.
4. Maintain Modification Control Program.
5. Maintain Preventive Maintenance Program.
6. Maintain Corrective Maintenance Program.
7. Maintain Quality Control Program.
8. Maintain Training Program.
9. Coordinate embarkation with units' embark personnel.
10. Maintain Operational Risk Management (ORM).

References:

1. MCO 1510.65
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 4733.1
5. MCO P4400.150
6. TI 4733-15/1
7. TI 4733-15/11
8. TI 8000 Series
9. Applicable MI's
10. Current MARADMINs
11. Applicable Technical Information
12. MCO 4400.16
13. UM 4790-5

Administrative Instructions: None.

2161-ADMN-2024: Maintain maintenance transaction reports

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given various records, reports, automated systems with internet access, and the current authorized technical information.

Standard: To ensure that all maintenance transactions reports are updated per the references.

Performance Steps:

1. Analyze DPR.
2. Verify transactions on DTL.
3. Verify exception reports.
4. Verify LM2 report.
5. Verify TAM report.
6. Submit maintenance transactions.
7. Conduct required reconciliation's.

References:

1. MCO 4400.16
2. MCO P4790.2
3. TM 4700-15/1
4. UM automated systems with internet access, and the current authorized technical information
5. Local Policies and Procedures

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/Automated Information Systems (MIMMS/AIS), Asset Tracking Logistics and Supply System II+ (ATLASS II+). Automated systems include CD-ROM, and web based information.

2161-ADMN-2025: Operate computer numerical control (CNC) equipment

Initial Training Setting: MOJT

Sustainment Interval: 6

Grade: Sgt, SSgt, GySgt

Condition: Given a computer numerical control machine, automated systems with internet access, and the current authorized technical information.

Standard: Ensure the computer numerical control machine is ready to perform required machinist operations per the references.

Performance Steps:

1. Use Shop Math.
2. Perform manual programming of machine.
3. Perform Computer Aided Manufacturing operations.
4. Perform Machining operations.
5. Complete maintenance and/or administrative forms and records.

References:

1. TM 4700-15/1
2. Machinist's Handbook
3. Operator's Manual
4. OPNAV 4790.2
5. TC 9-524

Administrative Instructions: See Administrative Note 1, para 15020.

CHAPTER 16

MOS 2171, ELECTRO-OPTICAL ORDNANCE REPAIRER INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	16000	16-1
EVENT CODING.....	16010	16-1
ADMINISTRATIVE NOTES.....	16020	16-1
INDEX OF INDIVIDUAL EVENTS BY LEVEL.....	16030	16-2
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	16040	16-4
1000 LEVEL INDIVIDUAL EVENTS.....	16050	16-6
2000 LEVEL INDIVIDUAL EVENTS.....	16060	16-24

MOS 2171, ELECTRO-OPTICAL ORDNANCE REPAIRER INDIVIDUAL TRAINING

16000. PURPOSE

This chapter contains individual training events for the Electro-Optical Ordnance Repairer.

16010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2171, indicating that the event is for MOS 2171, Electro-Optical Ordnance Repairer.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Basic Electronics	ELEC	2171-ELEC-xxxx
Intermediate Maintenance	INTM	2171-INTM-xxxx
Administrative Functions	ADMN	2171-ADMN-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains events in both levels.

16020. ADMINISTRATIVE NOTES

1. Maintenance and/or repairs limited to authorized echelon of maintenance.
2. To comply with 29 CFR 1910.1200 (Hazard Communication), employees who may be exposed to a hazardous material must (1) have been provided information and training prior to their initial assignment to work with the hazardous chemical and whenever the hazard changes; and (2) have access to label information and material safety data sheets to understand the hazard(s); and (3) to identify the necessary personal protective equipment and special precautions to use while working with the chemical.

16030. INDEX OF INDIVIDUAL EVENTS BY LEVEL

Event Code	Event	Page
	1000 LEVEL	
2171-ELEC-1001	Follow basic shop procedures	16-6
2171-ELEC-1002	Analyze electronic devices/components	16-7
2171-ELEC-1003	Analyze electronic circuits/components	16-7
2171-ELEC-1004	Follow basic maintenance procedures	16-8
2171-INTM-1011	Maintain AN/TAM-3B night sight test set	16-9
2171-INTM-1012	Maintain M220E4 tow weapon system	16-9
2171-INTM-1013	Maintain AN/TSM-140B tow field test set	16-10
2171-INTM-1014	Maintain AN/TSM-152 missile guidance test set	16-10
2171-INTM-1015	Maintain TS-3784/TAS boresight collimator test set	16-11
2171-INTM-1016	Maintain AN/TAM-5 amplifier test set	16-12
2171-INTM-1017	Maintain AN/PAQ-3 modular universal laser equipment	16-12
2171-INTM-1018	Maintain AN/GVS-5 laser infrared observation set	16-13
2171-INTM-1019	Maintain modular universal laser equipment (MULE) intermediate maintenance kit	16-13
2171-INTM-1020	Maintain passive night vision equipment	16-14
2171-INTM-1021	Maintain M1 series gunners quadrant	16-15
2171-INTM-1022	Maintain M49 observation telescope	16-15
2171-INTM-1023	Maintain M2A2 aiming circle	16-16
2171-INTM-1024	Maintain M198 Howitzer fire control system	16-16
2171-INTM-1025	Maintain M1A1 tank fire control system	16-17
2171-INTM-1026	Maintain direct support electronic system test set	16-18
2171-INTM-1027	Maintain light armored vehicle (LAV) series fire control system	16-18
2171-INTM-1028	Maintain TS-3620/GVS-5 test set	16-19
2171-INTM-1029	Maintain TS-4348/UV electronic systems test set	16-20
2171-INTM-1030	Maintain cross-leveling fixture	16-20
2171-INTM-1031	Maintain azimuth test fixture	16-21
2171-INTM-1032	Maintain PP-8333/U battery analyzer-charger (Cristie)	16-21
2171-INTM-1033	Maintain thermal sights	16-22
2171-INTM-1034	Maintain electro-optical equipment maintenance shelter	16-23
	2000 LEVEL	
2171-INTM-2001	Maintain M3 borescope	16-24
2171-INTM-2002	Maintain M1A2 infinity aiming reference colimator	16-24
2171-INTM-2003	Maintain M64A1 sight unit	16-25
2171-INTM-2004	Maintain shoulder-launched multipurpose assault weapon (SMAW) trigger assembly	16-25
2171-INTM-2005	Maintain assault amphibious vehicle (AAV) series fire control system	16-26
2171-INTM-2006	Maintain AN/VLQ-6 missile countermeasure device	16-26
2171-INTM-2007	Maintain straight tube telescope fixture	16-27
2171-INTM-2008	Maintain M21 remote sensing chemical agent automatic alarm	16-27

2171-ADMN-2021	Maintain ground ordnance maintenance-related programs	16-29
2171-ADMN-2022	Maintain electro-optical ordnance training program	16-29
2171-ADMN-2023	Maintain ground ordnance maintenance-related programs	16-30
2171-ADMN-2024	Maintain ground ordnance repair area	16-31
2171-ADMN-2025	Maintain compliance with security regulations	16-32
2171-ADMN-2026	Maintain ground ordnance safety program	16-32

16040. INDEX OF INDIVIDUAL EVENTS FUNCTIONAL AREA

Event Code	Event	Page
	BASIC ELECTRONICS	
2171-ELEC-1001	Follow basic shop procedures	16-6
2171-ELEC-1002	Analyze electronic devices/components	16-7
2171-ELEC-1003	Analyze electronic circuits/components	16-7
2171-ELEC-1004	Follow basic maintenance procedures	16-8
	INTERMEDIATE MAINTENANCE	
2171-INTM-1011	Maintain AN/TAM-3B night sight test set	16-9
2171-INTM-1012	Maintain M220E4 tow weapon system	16-9
2171-INTM-1013	Maintain AN/TSM-140B tow field test set	16-10
2171-INTM-1014	Maintain AN/TSM-152 missile guidance test set	16-10
2171-INTM-1015	Maintain TS-3784/TAS boresight collimator test set	16-11
2171-INTM-1016	Maintain AN/TAM-5 amplifier test set	16-12
2171-INTM-1017	Maintain AN/PAQ-3 modular universal laser equipment	16-12
2171-INTM-1018	Maintain AN/GVS-5 laser infrared observation set	16-13
2171-INTM-1019	Maintain modular universal laser equipment (MULE) intermediate maintenance kit	16-13
2171-INTM-1020	Maintain passive night vision equipment	16-14
2171-INTM-1021	Maintain M1 series gunners quadrant	16-15
2171-INTM-1022	Maintain M49 observation telescope	16-15
2171-INTM-1023	Maintain M2A2 aiming circle	16-16
2171-INTM-1024	Maintain M198 Howitzer fire control system	16-16
2171-INTM-1025	Maintain M1A1 tank fire control system	16-17
2171-INTM-1026	Maintain direct support electronic system test set	16-18
2171-INTM-1027	Maintain light armored vehicle (LAV) series fire control system	16-18
2171-INTM-1028	Maintain TS-3620/GVS-5 test set	16-19
2171-INTM-1029	Maintain TS-4348/UV electronic systems test set	16-20
2171-INTM-1030	Maintain cross-leveling fixture	16-20
2171-INTM-1031	Maintain azimuth test fixture	16-21
2171-INTM-1032	Maintain PP-8333/U battery analyzer-charger (Cristie)	16-21
2171-INTM-1033	Maintain thermal sights	16-22
2171-INTM-1034	Maintain electro-optical equipment maintenance shelter	16-23
2171-INTM-2001	Maintain M3 borescope	16-24
2171-INTM-2002	Maintain M1A2 infinity aiming reference colimator	16-24
2171-INTM-2003	Maintain M64A1 sight unit	16-25
2171-INTM-2004	Maintain shoulder-launched multipurpose assault weapon (SMAW) trigger assembly	16-25
2171-INTM-2005	Maintain assault amphibious vehicle (AAV) series fire control system	16-26
2171-INTM-2006	Maintain AN/VLQ-6 missile countermeasure device	16-26
2171-INTM-2007	Maintain straight tube telescope fixture	16-27
2171-INTM-2008	Maintain M21 remote sensing chemical agent automatic alarm	16-27

	ADMINISTRATIVE FUNCTIONS	
2171-ADMN-2021	Maintain ground ordnance maintenance-related programs	16-29
2171-ADMN-2022	Maintain electro-optical ordnance training program	16-39
2171-ADMN-2023	Maintain ground ordnance maintenance-related programs	16-30
2171-ADMN-2024	Maintain ground ordnance repair area	16-31
2171-ADMN-2025	Maintain compliance with security regulations	16-32
2171-ADMN-2026	Maintain ground ordnance safety program	16-32

16050. 1000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: BASIC ELECTRONICS

2171-ELEC-1001: Follow basic shop procedures

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given common tools, power tools, precision measuring tools, and the references.

Standard: Maintain assigned work area in the accomplishment of maintenance assignments per the references.

Performance Steps:

1. Organize tools and equipment within work area.
2. Follow instructions for care of tools.
3. Observe safety regulations.
4. Observe hazardous material regulations.

References:

1. Material safety data sheets for hazardous materials
2. 29 CFR 1910.1200
3. DOD INST 6050.5
4. DOD INST 6055.11
5. FM 9-243
6. MCO P5090.2
7. TM 10209-10/1
8. TM 9-254
9. U.S. Army TB 43-0134, Battery Disposition and Disposal

Administrative Instructions: See Administrative Notes, para 16020.

2171-ELEC-1002: Analyze electronic devices/components

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given the reference.

Standard: Determine maintenance or repair requirements per the reference.

Performance Steps:

1. Locate equipment electronic devices.
2. Determine function of electronic devices.
3. Test electronic devices.

4. Identify maintenance or repair requirements.

References:

1. FM 11-62

Current MCIs:

1. MCI 11.42, Solid-State Devices
2. MCI 28.6, Fundamentals of Digital Logic
3. MCI 28.20, Electronics Mathematics for Marines
4. MCI 13.34, Math for Marines

2171-ELEC-1003: Analyze electronic circuits/components

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given the references.

Standard: Determine maintenance or repair requirements per the references.

Performance Steps:

1. Identify equipment electronic circuits.
2. Determine function of electronic circuits.
3. Test electronic circuits.
4. Identify maintenance or repair requirements.

References:

1. FM 11-60
2. FM 11-61
3. FM 11-62
4. FM 11-72

2171-ELEC-1004: Follow basic maintenance procedures

Initial Training Setting: FS

Sustainment Interval: 6

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given equipment repair records and forms and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Utilize required publications and directives.
2. Adhere to modification instructions.
3. Adhere to calibration procedures.
4. Complete maintenance management forms needed to document work.

References:

1. MCO 4790.2
2. TM 4700-15/1
3. UM 4790-5
4. UM 4400-124
5. MCO P5215.17
6. NAVMC 2761
7. SL-1-2
8. SL-1-3
9. TI 4733-15/1

Current MCIs:

1. MCI 04.10, MIMMS-AIS (Maintenance Automated Information System)
-

FUNCTIONAL AREA: INTERMEDIATE MAINTENANCE

2171-INTM-1011: Maintain AN/TAM-3B night sight test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate AN/TAM-3B Night Sight Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. SL-3-08121
5. TM 9-5855-255-14/24P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1012: Maintain M220E4 tow weapon system

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5

3. MCO P5090.2
4. TM 9-1425-450-12
5. TM 9-1425-450-24P
6. TM 9-1425-450-34-1
7. TM 9-1425-450-34-2
8. TM 9-1425-450-L
9. TM 9-1425-451-34
10. TM-9999-15/1

Administrative Instructions: See Administrative Notes, para 16020.

Current MCIs:

1. 03.55, The TOW2 Weapon System Crewman

2171-INTM-1013: Maintain AN/TSM-140B tow field test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate AN/TSM-140B TOW Field Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. SL-3-07723
5. TM 9-1425-451-34
6. TM 9-4935-452-14
7. TM 9-4935-474-14-2-1
8. TM 9999-15/1
9. TM 9999-15/2

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1014: Maintain AN/TSM-152 missile guidance test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate AN/TSM-152 Missile Guidance Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 9-1425-450-34-1
5. TM 9-4935-450-24P
6. TM 9-4935-452-24P
7. TM 9-4935-455-14

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1015: Maintain TS-3784/TAS boresight collimator test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate TS-3784/TAS Bore sight Collimator Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 9-5855-286-14
5. TM 9-5855-286-24P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1016: Maintain AN/TAM-5 amplifier test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate AN/TAM-5 Amplifier Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 9-4935-455-14
5. TM 9-4935-455-24P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1017: Maintain AN/PAQ-3 modular universal laser equipment (MULE)

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. DOD INST 6055.11
4. MCO P5090.2
5. TM 08579A-12/1
6. TM 08579A-24P/3A

7. TM 08579A-34/2A
8. TM 08911A-12/1
9. TM 08911A-34&P/2
10. TM-9999-15/1
11. TM-9999-15/2
12. MCO 5104.1

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1018: Maintain AN/GVS-5 laser infrared observation set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. DOD INST 6055.11
4. MCO P5090.2
5. TM 11-5860-201-20
6. TM 11-5860-201-30
7. TM 11-5860-201-30P
8. TM 9999-15/1
9. TM 9999-15/2
10. MCO 5104.1

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1019: Maintain modular universal laser equipment (MULE) maintenance kit

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate Intermediate Maintenance Kit.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. DOD INST 6055.11
4. MCO P5090.2
5. SL-3-08892A
6. TM 08579A-34/2A
7. TM 08579A-34P/4A
8. TM 9999-15/1
9. TM 9999-15/2

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1020: Maintain passive night vision equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 09500A-23&P/2
5. TM 10271A-23&P/2
6. TM 11-5855-213-23P
7. TM 11-5855-214-23&P
8. TM 11-5855-238-23&P
9. TM 11-5855-249-10
10. TM 11-5855-249-20
11. TM 8F419B-35&P
12. TM 9-1240-314-35P

13. TM 9999-15/1
14. TM 9999-15/2

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1021: Maintain M1 series gunners quadrant

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. MCO 5104.3
3. TI 5104-15/2

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1022: Maintain M49 observation telescope

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200

2. DOD INST 6050.5
3. MCO P5090.2
4. RS-00591A-50/1
5. TM 9-6650-212-12
6. TM 9-6650-212-34P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1023: Maintain M2A2 aiming circle

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. SL-3-00476C
5. TM 00476C-24&P

Administrative Instructions: See Administrative Notes. Para 16020.

2171-INTM-1024: Maintain M198 Howitzer fire control

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.

4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. MCO 5104.3
5. TM 9-1025-211-20&P
6. TM 9-1025-211-34
7. TM 9-1240-375-34
8. TM 9-1240-375-34P

Administrative Instructions: See Administrative Notes, para 16020.

Current MCIs:

1. 08.20D, The M198, 155mm Towed Howitzer

2171-INTM-1025: Maintain M1A1 tank fire control system

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Ensure that radioactive materials are handled according to installation's turn-in requirements and in accordance with applicable publications.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. MCO 5104.3
5. TM 08953A-24/4-2
6. TM 08953A-34/7-1
7. TM 08953A-34P/8
8. TM 10262A-14&P/1
9. TM 10262A-14/2
10. TM 9-254
11. TM 9-258
12. TM 9-4931-586-12-1&P
13. TM 9-4931-586-12-2&P
14. TM 9-4931-586-12-4&P

Administrative Instructions: See Administrative Notes, para 16020.

Current MCIs:

1. 18.46, Tank Gunnery/Direct Fire Procedures (M1A1)

2171-INTM-1026: Maintain direct support electronic system test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate Direct Support Electronic System Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 10262A-14&P/1
5. TM 9-4931-586-12-1&P
6. TM 9-4931-586-12-2&P
7. TM 9-4931-586-12-4&P
8. TM 9-4931-586-30&P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1027: Maintain light armored vehicle (LAV) series fire control system

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.

2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. SL-4-8H161B
5. TM 08594A-20/3A
6. TM 08594A-34/8
7. TM 08652A-34/5
8. TM 10262A-14&P/1
9. TM 10262A-14/2
10. TM 8H161B-34
11. TM 9-4931-586-12-1&P
12. TM 9-4931-586-12-2&P
13. TM 9-4931-586-12-4&P

Administrative Instructions: See Administrative Notes, para 16020.

Current MCIs:

1. 03.41, LAV-25 Gunnery

2171-INTM-1028: Maintain TS-3620/GVS-5 test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate TS-3620/GVS-5 Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 11-6625-2684-12
5. TM 11-6625-2684-20P
6. TM 11-6625-2684-30
7. TM 11-6625-2684-30P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1029: Maintain TS-4348/UV electronic systems test set

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate TS-4348/UV Electronic Systems Test Set.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 11-5855-299-12&P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1030: Maintain cross-leveling fixture

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate Cross-Leveling Fixture.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. Applicable equipment technical manuals
2. SL-3-02220A
3. TM 9-254

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1031: Maintain azimuth test fixture

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate Azimuth Test Fixture.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. Applicable equipment technical manuals
2. Installation-specific used rag turn-in requirements
3. Material safety data sheets for hazardous materials
4. 29 CFR 1910.1200
5. DOD INST 6050.5
6. MCO P5090.2
7. SL-3-02194A
8. TM 9-254

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1032: Maintain PP-8333/U battery analyzer-charger (CRISTIE)

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate PP-8333/U Battery Charger.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 09591A-12/1
5. TM 09591A-34/2

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-1033: Maintain thermal sights

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Perform required corrective maintenance.
3. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 09688A-24&P
5. Unit Table of Equipment (T/E)
6. Unit Table of Organization (T/O)
7. MCBUL 3000
8. MCO 3000.11
9. MCO P4790.2
10. Unit Table of Equipment (T/E)
11. MCO P4400.150
12. MCO P4400.82
13. MCO P4790.2
14. MCO P7100.8
15. TM 4700-15/1
16. UM 4400-124
17. UM 4790-5
18. UM 4400-15
19. MCO P4790.2
20. TM 4700-15/1
21. UM 4790-5

Administrative Instructions:

1. See Administrative Notes, para 16020.
2. Thermal Sights include AN/PAS-13, AN/PAS-18, AN/TAS-4, and the associated equipment.

3. Thermal sights for the M1A1 Abrams Tank are covered in 2171.02.32. Refer to this task for performance steps and references.
4. Thermal sights for the LAV series are covered in 2171.02.34.

2171-INTM-1034: Maintain electro-optical equipment maintenance shelter

Initial Training Setting: FS

Sustainment Interval: 24

Grade: Pvt, PFC, LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Set up maintenance shelter.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. SL-3-08194
5. SL-3-08485
6. SL-3-09129A
7. TM 9-4935-454-24P
8. TM 9-4935-472-14-1

Administrative Instructions: See Administrative Notes, para 16020.

Current MCIs:

1. 11.41, Marine Electrician
-

16060. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: INTERMEDIATE MAINTENANCE

2171-INTM-2001: Maintain M3 borescope

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. SL-3-08552A
5. TM 08552A-13&P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-2002: Maintain M1A2 infinity aiming reference collimator

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Ensure that radioactive materials are handled according to installation's turn-in requirements and in accordance with applicable publications.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TI 5104-15/2
5. TM 04914B-34&P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-2003: Maintain M64A1 sight unit

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. MCO 5104.3
5. TM 1240-34&P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-2004: Maintain shoulder-launched multipurpose assault weapon (SMAW) trigger assembly

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 08673A-25&P/2A

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-2005: Maintain assault amphibious vehicle (AAV) series fire control system

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.
4. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 10004A-25&P2
5. TM 8F419B-35&P

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-2006: Maintain AN/VLQ-6 missile countermeasure device

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform limited technical inspection.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. MCO P5090.2
4. TM 09842A-12/1
5. TM 09842A-34/2

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-2007: Maintain straight tube telescope fixture

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Operate Straight Tube Telescope Fixture.
2. Perform preventive maintenance.
3. Identify discrepancies/unserviceable parts or components.
4. Perform required corrective maintenance.
5. Complete maintenance and/or administrative forms and records.

References:

1. Applicable equipment technical manuals
2. 29 CFR 1910.1200
3. DOD INST 6050.5
4. MCO P5090.2
5. TM 9-254

Administrative Instructions: See Administrative Notes, para 16020.

2171-INTM-2008: Maintain M21 remote sensing chemical agent automatic alarm

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: LCpl, Cpl, Sgt, SSgt, GySgt

Condition: Given required equipment and the references.

Standard: Validate equipment serviceability and completion of maintenance inspections and procedures per the references.

Performance Steps:

1. Perform preventive maintenance.
2. Identify discrepancies/unserviceable parts or components.
3. Perform required corrective maintenance.

References:

1. 29 CFR 1910.1200
2. DOD INST 6050.5
3. DOD INST 6055.11
4. MCO 5104.1
5. MCO P5090.2
6. TM 09870A-10/1
7. TM 09870A-23&P/2

Administrative Instructions: See Administrative Notes, para 16020.

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2171-ADMN-2021: Maintain ground ordnance maintenance-related programs

Initial Training Setting: MOJT

Sustainment Interval: 24

Grade: Sgt, SSgt, GySgt

Condition: Given equipment resources and the references.

Standard: Ensure optimum mission support and use of resources per the references.

Performance Steps:

1. Provide input to local policies and procedures (LPP).
2. Coordinate use of maintenance resources.
3. Coordinate ground ordnance equipment availability.
4. Coordinate ground ordnance supply support program.
5. Maintain ground ordnance maintenance management functions.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. UM 4790-5
4. Unit Table of Equipment (T/E)
5. Unit Table of Organization (T/O)
6. MCBUL 3000
7. MCO 3000.11
8. MCO P4400.150
9. MCO P4400.82
10. MCO P7100.8
11. UM 4400-124
12. UM-4400-15

Current MCIs:

1. MCI 04.14, Ground Maintenance Management Procedures for Supervisors
-

2171-ADMN-2022: Maintain electro-optical ordnance training program

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given a unit annual training plan and the references.

Standard: Provide appropriate training progression for subordinates per the references.

Performance Steps:

1. Identify individual training requirements.
2. Plan electro-optical equipment operator and maintenance training program.
3. Conduct MOS training.

References:

1. DOD INST 6050.5
2. DOD INST 6055.11
3. MCO 1510.34
4. MCO 3501.7
5. MCO P4790.2
6. MCO P5090.2
7. MCO 1510.66

Administrative Instructions: To comply with 29 CFR 1910.1200 (Hazard Communication), employees who may be exposed to a hazardous material must (1) have been provided information and training prior to their initial assignment to work with the hazardous chemical and whenever the hazard changes; and (2) have access to label information and material safety data sheets to understand the hazard(s); and (3) to identify the necessary personal protective equipment and special precautions to use while working with the chemical.

2171-ADMN-2023: Maintain ground ordnance maintenance-related programs

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given electro-optical equipment and the references.

Standard: Ensure associated program information and records are maintained per the references.

Performance Steps:

1. Determine requirements for maintenance-related programs.
2. Maintain shop modification control program.
3. Maintain shop calibration control program.
4. Maintain new equipment warranty program.
5. Maintain ground ordnance equipment maintenance records and forms.
6. Coordinate repair and return (R&R) program.
7. Submit product quality deficiency reports (PQDR) as required.
8. Submit items for WIR as required.
9. Maintain shop quality control program.
10. Maintain shop publications library.
11. Maintain shop ground ordnance preventive maintenance (PM) program.
12. Maintain shop ground ordnance corrective maintenance (CM) program.
13. Prepare ground ordnance equipment for embarkation.
14. Maintain shop support equipment and tool control program.
15. Maintain Corrosion Prevention and Control (CPAC) program.

References:

1. Applicable Electro-Optical Equipment Material Fielding Plans (MFPS)

2. Applicable Equipment Technical Manuals
3. Applicable Stock Lists
4. MI Standards File (Microfiche)
5. Unit Table of Equipment (T/E)
6. Unit Table of Organization (T/O)
7. MCO 4105.2
8. MCO 4733.1
9. MCO 4855.10
10. MCO P4400.82
11. MCO P4790.2
12. MCO P5215.17
13. P5600.31
14. TI 4710-14/1
15. TI 4733-15/1
16. NAVMC 2761
17. UM-PLMS
18. MC (ML), (MICROFICHE)
19. Applicable Equipment Technical Manuals
20. DOD INST 6050.5
21. 29 CFR 1910.1200
22. DOD INST 6055.11

Current MCIs:

1. MCI 04.14, Ground Maintenance Management Procedures for Supervisors
-

2171-ADMN-2024: Maintain ground ordnance repair area

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given an order specifying location to be used, list of Table of Equipment (T/E), list of Material Handling Equipment (MHE), roster of repair section personnel, and the reference.

Standard: Establish and maintain separate areas for work, storage, supply, and hazardous materials per the reference.

Performance Steps:

1. Designate shipping and receiving area(s).
2. Designate work area.
3. Designate location of shop office.
4. Designate location of technical library.
5. Designate location of tool storage area.
6. Designate locations of repair jobs, layettes, pre-expend bin, and storage areas for equipment and parts.

References:

1. MCO P4790.2
-

2171-ADMN-2025: Maintain compliance with security regulations

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given a designated area, controlled/classified equipment or materials for storage, and the references.

Standard: Ensure classified or controlled materials or equipment are properly secured per the references.

Performance Steps:

1. Maintain physical security of classified information, publications, or records.
2. Maintain physical security of arms, and ammunition, and explosives (AA&E), and security assets.

References:

1. Local policies and procedures (LPP)
2. MCO 4340.1
3. MCO 5500.6
4. OPNAVINST 5530.13
5. OPNAVINST 5530.14
6. MCO 5530.14

Current MCIs:

1. 21.24, Armory Procedures

2171-ADMN-2026: Maintain ground ordnance safety program

Initial Training Setting: MOJT

Sustainment Interval: 12

Grade: Sgt, SSgt, GySgt

Condition: Given the references.

Standard: Ensure a safe maintenance environment through routine training and inspections in accordance with the references.

Performance Steps:

1. Identify safety requirements.
2. Inspect maintenance facility for safety-related problems.
3. Assign Safety Noncommissioned Officer (NCO).
4. Conduct safety training.
5. Document training.
6. Conduct internal reviews.
7. Comply with laser safety program.
8. Comply with radiation safety program.

9. Comply with hazardous material/waste program.

References:

1. Local Policies and Procedures (LLP)
2. Unit Safety Standing Operating Procedures (SOP)
3. 29 CFR 1910.1200
4. DOD INST 6050.5
5. DOD INST 6055.11
6. DOD INST 6055.8
7. MCO 5100.29
8. MCO 5100.8
9. MCO 5104.2
10. MCO 5104.3
11. MCO P5090.2
12. MCO P5102.1
13. OPNAVINST 5100.19
14. OPNAVINST 5100.23
15. DOD INST 6055.11
16. MCO 5104.3
17. MCO P5090.2
18. TB MED 524, Control of Hazards to Health from Laser Radiation
19. DOD INST 6055.8
20. MCO 5104.2
21. MCO 5104.3
22. MCO P5090.2
23. TI 5104-15/1A
24. TI 5104-15/2
25. MCO P5090.2
26. TM 9-254

Administrative Instructions: To comply with 29 CFR 1910.1200 (Hazard Communication), employees who may be exposed to a hazardous material must (1) have been provided information and training prior to their initial assignment to work with the hazardous chemical and whenever the hazard changes; and (2) have access to label information and material safety data sheets to understand the hazard(s); and (3) to identify the necessary personal protective equipment and special precautions to use while working with the chemical.

CHAPTER 17

MOS 2181, GROUND ORDNANCE WEAPONS CHIEF/
SENIOR GROUND ORDNANCE WEAPONS CHIEF INDIVIDUAL TRAINING

	<u>Paragraph</u>	<u>Page</u>
PURPOSE.....	17000	17-1
EVENT CODING.....	17010	17-1
ADMINISTRATIVE NOTES.....	17020	17-1
INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA.....	17030	17-2
2000 LEVEL INDIVIDUAL EVENTS.....	17040	17-3

**MOS 2181, GROUND ORDNANCE WEAPONS CHIEF/
SENIOR GROUND ORDNANCE WEAPONS CHIEF INDIVIDUAL TRAINING**

17000. PURPOSE

This chapter contains individual training events for the Ground Ordnance Weapons Chief/Senior Ground Ordnance Weapons Chief.

17010. EVENT CODING

Events in the T&R manual are depicted with a 12 field alphanumeric system, i.e. xxxx-xxxx-xxxx. This chapter utilizes the following methodology:

a. Field one - Each event starts with 2181, indicating that the event is for MOS 2181, Ground Ordnance Weapons Chief/Senior Ground Ordnance Weapons Chief.

b. Field two - This field is alpha characters indicating a functional area. The functional areas for this chapter are listed below:

<u>Functional Area</u>	<u>Field Name</u>	<u>Example</u>
Administrative Functions	ADMN	2181-ADMN-xxxx
Technical Functions	TECH	2181-TECH-xxxx

c. Field three - All individual events within T&R Manuals are either 1000-level for events taught at MOS-producing formal schools or 2000-level for events taught at advanced-level schools or MOJT. This chapter contains events in the 2000 level only.

17020. ADMINISTRATIVE NOTES

Automated systems include CD-ROM, and web-based information.

17030. INDEX OF INDIVIDUAL EVENTS BY FUNCTIONAL AREA

Event Code	Event	Page
	ADMINISTRATIVE FUNCTIONS	
2181-ADMN-2001	Establish maintenance management programs for ground ordnance equipment	17-3
2181-ADMN-2002	Supervise ground ordnance maintenance resources programs	17-3
2181-ADMN-2003	Supervise publications and directives in support of ground ordnance equipment programs	17-4
2181-ADMN-2004	Manage ground ordnance maintenance MOS training programs	17-5
2181-ADMN-2005	Supervise support equipment programs for ground ordnance equipment	17-5
2181-ADMN-2006	Supervise supply support procedures for ground ordnance equipment	17-6
2181-ADMN-2007	Supervise ground ordnance maintenance facilities	17-7
2181-ADMN-2008	Supervise maintenance production schedules for ground ordnance equipment	17-7
2181-ADMN-2009	Supervise maintenance related programs for ground ordnance	17-8
2181-ADMN-2010	Supervise preventive maintenance checks and services (PMCS) for ground ordnance equipment	17-9
2181-ADMN-2011	Supervise corrective maintenance (CM) programs for ground ordnance equipment	17-9
2181-ADMN-2012	Supervise modification programs for ground ordnance equipment	17-10
2181-ADMN-2013	Monitor environmental compliance for ground ordnance equipment	17-11
2181-ADMN-2014	Supervise shop safety program for ground ordnance equipment	17-12
2181-ADMN-2015	Supervise embarkation of ground ordnance equipment	17-13
2181-ADMN-2016	Supervise maintenance shop information requirements for ground ordnance equipment	17-13
2181-ADMN-2017	Prepare routine correspondence, messages, and reports for ground ordnance equipment	17-14
2181-ADMN-2018	Coordinate load test procedures for ground ordnance equipment	17-14
2181-ADMN-2019	Supervise physical security of ground ordnance equipment	17-15
2181-ADMN-2020	Assist in the fielding of ground ordnance equipment	17-15
2181-ADMN-2021	Identify the phases in the acquisition process	17-16
	TECHNICAL FUNCTIONS	
2181-TECH-2031	Monitor unit arms, ammunition, & explosives (AA&E) programs	17-17
2181-TECH-2032	Provide technical supervision for the repair of ground ordnance equipment	17-17

17040. 2000 LEVEL INDIVIDUAL EVENTS

FUNCTIONAL AREA: ADMINISTRATIVE FUNCTIONS

2181-ADMN-2001: Establish maintenance management programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure mission requirements are met per the references.

Performance Steps:

1. Identify mission requirements.
2. Analyze capabilities.
3. Determine resource requirements.
4. Analyze external requirements.
5. Develop procedures to comply with functional areas of maintenance management.
6. Implement maintenance management programs.
7. Supervise maintenance management programs.

References:

1. MCO P4400.150
2. MCO P4790.2
3. MCO P1200.7
4. Local Policies and Procedures
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2002: Supervise ground ordnance maintenance resources

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, personnel, maintenance facilities, and a budget.

Standard: Ensure mission requirements and equipment readiness are maintained per the references.

Performance Steps:

1. Identify available resources.

2. Consolidate time into usable blocks.
3. Assist the Maintenance Officer/MMO in conducting T/O&E reviews.
4. Identify personnel strengths and weaknesses to match them against mission requirements.
5. Ensure that repair parts and maintenance related supplies are requisitioned when required.
6. Ensure accountability of repair parts and maintenance related supplies.
7. Identify all tools, chests, sets, and TMDE equipment are on hand to support mission requirements.
8. Identify facilities required to support the mission.
9. Identify publication requirements to support the mission.
10. Identify funding requirements to support the mission.

References:

1. MCO P5600.31
2. MCO P4790.2
3. MCWP 4-11
4. MCDP-4
5. TM 4700-15/1
6. MCO P4400.150
7. MCO 4733.1
8. MCO P5215.1
9. MCO P5215.17
10. MCO 4710.8
11. Table of Organization & Equipment (T/O&E)
12. Local Policies and Procedures

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2003: Supervise publications and directives in support of ground ordnance equipment programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure maintenance libraries and mission requirements are maintained per the references.

Performance Steps:

1. Determine publication requirements.
2. Register requirements.
3. Establish control procedures.
4. Maintain the publication control system.
5. Conduct internal reviews.

References:

1. Table of Organization & Equipment (T/O&E)
2. MCO P5215.1
3. SL 1-2/3

4. UM-MCPDS
5. Local Policies and Procedures
6. UM-PLMS
7. MCO 5600.31
8. MCO P5215.17
9. MCO P4790.2
10. Special allowance list

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2004: Manage ground ordnance maintenance MOS training programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and personnel records.

Standard: Ensure maintenance MOS training is conducted per the references.

Performance Steps:

1. Identify requirements.
2. Identify training resources.
3. Establish the MOS training sustainment matrix.
4. Schedule annual MOS training.
5. Develop lesson plans.
6. Conduct training.
7. Document training.
8. Conduct internal reviews of training plan.

References:

1. MCO 1510 Series
2. MCO P4790.2
3. MCO 1553.3
4. MCRP 3-OA
5. MCRP 3-OB
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2005: Supervise support equipment programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment is utilized per the mission requirements and references.

Performance Steps:

1. Identify requirements.
2. Establish control procedures.
3. Supervise tool control procedures.
4. Supervise calibration procedures.
5. Supervise preventive maintenance for support equipment.
6. Supervise corrective maintenance for support equipment.
7. Conduct internal reviews.

References:

1. MCO P4790.2
2. TM 4700-15/1
3. MCO 4733.1
4. MCO P4400.150
5. TI 4733-15/1
6. TI 4733-15/11
7. Current MARADMINs
8. Applicable Technical Information
9. Table of Organization & Equipment (T/O&E)
10. Special Allowance List

Administrative Instructions: The term support equipment includes but is not limited to tool sets, kits, chests, hoists, jacks, stands, and TMDE (calibrations equipment). Automated systems include CD-ROM and web-based information.

2181-ADMN-2006: Supervise supply support procedures for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure supply support programs are employed per the mission requirements and references.

Performance Steps:

1. Identify supply requirements.
2. Supervise the accountability for all repair parts.
3. Supervise validation procedures.
4. Supervise reconciliation procedures.
5. Conduct internal reviews.

References:

1. MCO P4400.82
2. MCO P4790.2
3. TM 4700-15/1
4. MCO 8300.1
5. MCO 4340.1
6. MCO P4400.150
7. UM 4400-124
8. Table Of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2007: Supervise ground ordnance maintenance facilities

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment records, and facilities.

Standard: Ensure maintenance facilities are utilized per the mission requirements and references.

Performance Steps:

1. Identify facility requirements.
2. Develop maintenance flow plan.
3. Organize facilities to support mission.
4. Evaluate Operational Risk Management (ORM).
5. Maintain facilities.

References:

1. MCO P4790.1
2. MCO P4790.2
3. Applicable Technical Information
4. MCO P11262.2
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2008: Supervise maintenance production schedules for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MgySgt

Condition: Given the references, automated systems with internet access, automated reports, equipment records, and maintenance resources.

Standard: Ensure maintenance production is accomplished per the mission requirements available resources and references.

Performance Steps:

1. Determine available resources.
2. Evaluate workload.
3. Consolidate time into usable blocks.
4. Determine production capability.
5. Prioritize workload.
6. Assign work.
7. Ensure quality control procedures.

References:

1. MCO P4790.1
2. MCO P4790.2
3. Local Policies and Procedures
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2009: Supervise maintenance related programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure maintenance related programs are accomplished per the mission requirements and references.

Performance Steps:

1. Identify mission requirements.
2. Supervise Product Quality Deficiency Report (PQDR) program.
3. Supervise Corrosion Prevention and Control (CPAC) program.
4. Supervise a Quality Control (QC) program.
5. Supervise unit level execution of Depot Level Maintenance programs.
6. Supervise execution of Contract Logistic Support (CLS).
7. Supervise execution of equipment warranties.
8. Supervise demilitarization procedures.
9. Supervise Military Awards/Incentives Program.

References:

1. MCO P4790.2
2. MCO 4733.1
3. MCO 4855.10
4. MCO P4790.1
5. MCO 4105.2
6. MCO 1650.17
7. MCO P4790.3

8. MCO 3000.11C
9. MCO 4790.18
10. MCO 8300.1
11. TM 4795-12
12. TM 4795-34
13. TM 4750-15/1
14. DOD 4160.21-M-1
15. Applicable Unit Logistics Support Summary (ULSS)
16. Applicable Technical Information
17. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2010: Supervise preventive maintenance checks and services (PMCS) for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MgySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure preventive maintenance checks and services are accomplished per the mission requirements and references.

Performance Steps:

1. Identify PMCS requirements.
2. Identify cyclic maintenance requirements.
3. Identify special maintenance requirements.
4. Identify deferred maintenance requirements.
5. Develop PMCS schedule.
6. Supervise documentation of PMCS program.
7. Supervise Quality Control (QC) procedures for PMCS program.

References:

1. MCO P4790.1
2. MCO P4790.2
3. TM 4700-15/1
4. Applicable Technical Information
5. Local Policies and Procedures
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2011: Supervise corrective maintenance (CM) programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure corrective maintenance is accomplished per the mission requirements and references.

Performance Steps:

1. Identify corrective maintenance requirements.
2. Supervise the prioritization of corrective maintenance requirements.
3. Ensure all applicable maintenance procedures are followed.
4. Ensure all applicable reporting procedures are followed.
5. Monitor progress of corrective maintenance.
6. Ensure quality control procedures are followed.
7. Maintain liaison with external maintenance activities.

References:

1. MCO P4790.1
2. MCO P4790.2
3. TM 4700-15/1
4. Applicable Technical Information
5. Applicable Unit Logistics Support Summary (ULSS)
6. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2012: Supervise modification programs for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment modifications are accomplished per the mission requirements and references.

Performance Steps:

1. Identify equipment modification requirements.
2. Verify equipment configurations.
3. Supervise modifications.
4. Supervise documentation of modifications.

References:

1. MCO P4790.1
2. MCO P4790.2
3. TM 4700-15/1
4. Applicable Modification Instructions (MI's)
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2013: Monitor environmental compliance for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure environmental compliance procedures are observed per the mission requirements and references.

Performance Steps:

1. Determine environmental compliance requirements.
2. Monitor unit environmental compliance with unit representative.
3. Implement corrective actions.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P5090.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.150
8. MCO 4450.12
9. TB MED 524
10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current MARADMINs
13. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of environmental compliance should include but is not limited to the following areas of concern: radiation safety, Hazardous Material (HAZMAT) handling procedures, Depleted Uranium (DU) hazards, Nuclear Regulatory Commission (NRC) Licenses, and Material Safety Data Sheets (MSDS). See Administrative Notes, para 17020.

2181-ADMN-2014: Supervise shop safety program for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, and a maintenance facility.

Standard: Ensure shop safety practices are observed per the mission requirements and references.

Performance Steps:

1. Determine safety program requirements.
2. Monitor compliance with shop safety procedures.
3. Implement corrective actions.

References:

1. 29 CFR 1910.12000
2. MCO 5100.29
3. MCO P4790.2
4. MCO P5090.2
5. MCO 5100.8
6. MCO 5104.3
7. MCO P4400.105
8. MCO 4450.12
9. TB MED 524
10. NAVSEATM 50420-AA-RAD-010
11. Current ALMARs
12. Current MARADMINs
13. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area of safety encompasses all aspects of ground safety, which includes but is not limited to the following areas of concern: laser safety, Occupational Safety & Health Administration (OSHA) regulations & policies, Material Safety Data Sheets (MSDS), battery rooms, Personal Protective Equipment (PPE), heat conditions, fire protection, medical surveillance programs, and industrial hygiene. See Administrative Notes, para 17020.

2181-ADMN-2015: Supervise embarkation of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure that ordnance equipment is embarked per the mission requirements and references.

Performance Steps:

1. Determine embarkation requirements.
2. Ensure that requirements are documented.
3. Supervise coordination with embarkation personnel.
4. Supervise the preparation of equipment for embark.

References:

1. MSE/Unit embarkation
2. Table of Organization & Equipment (T/O&E)
3. MCWP 4-1

4. NAVMC 2706
5. MCO 4030.16
6. MCO 4030.19
7. MCO 4030.25
8. MCO 4030.33
9. MCO 4030.36
10. MCO 4110.2
11. MCO 4400.16
12. MCO P4400.150
13. MCO P4600.14
14. MCO P4600.19
15. MCO 4600.25
16. MCO 4600.30
17. MCO 4610.15
18. MCO P4610.19

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2016: Supervise maintenance shop information requirements for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure ordnance equipment information is completed per the mission requirements and references.

Performance Steps:

1. Identify maintenance information requirements.
2. Identify required output reports.
3. Supervise completion of maintenance resource reports.
4. Analyze performance indicators of reports.
5. Conduct trend analysis of reports.
6. Recommend corrective action.
7. Review message traffic for information concerning ground ordnance equipment.

References:

1. MCO P4790.2
2. Current MARADMINs
3. Applicable Technical Information
4. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This area should encompass all aspects of automated maintenance reporting procedures and systems, which includes but is not limited to the following: Marine Integrated Maintenance Management/Automated Information Systems (MIMMS/AIS), Asset Tracking Logistics and Supply System II+ (ATLASS II+), and Defense Messaging System (DMS). See Administrative Notes, para 17020.

2181-ADMN-2017: Prepare routine correspondence, messages, and reports for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, and the information required to publish.

Standard: Ensure correspondence, messages, and reports are completed per the mission requirements and references.

Performance Steps:

1. Draft correspondence as required.
2. Draft messages as required.
3. Draft reports as required.
4. Supervise maintenance of files.

References:

1. SECNAVINST 5216.5
2. Local Policies and Procedures
3. MCO P1070.12
4. MCWP 3-1
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2018: Coordinate load test procedures for ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, and equipment records.

Standard: Ensure load testing is conducted, certified, and maintained per the mission requirements and references.

Performance Steps:

1. Identify load-testing requirements.
2. Establish a load test certification schedule.
3. Assist certifying authority.
4. Supervise completion of administrative functions.

References:

1. MCO P11240.106

2. MCO P11262.2
3. NAVFAC P307
4. Applicable Technical Information
5. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2019: Supervise physical security of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, equipment records, and ground ordnance equipment storage facilities.

Standard: Ensure ground ordnance equipment is safeguarded from theft/tampering per the mission requirements and references.

Performance Steps:

1. Identify security requirements.
2. Review security procedures.
3. Evaluate security compliance of ordnance storage facilities.
4. Assist in arms, ammunition & explosives (AA&E) screenings.
5. Ensure personnel are security trained.
6. Ensure accountability of AA&E.

References:

1. MCO P5530.14
2. OPNAVINST 5530.13
3. OPNAVINST 5530.14
4. MCO 5500.6
5. MCO P4400.150
6. MCO 4340.1
7. MCO 8300.1
8. Current ALMARs
9. Current MARADMINs
10. Applicable Technical Information
11. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2020: Assist in the fielding of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment fielding is supported and accomplished per the mission requirements and references.

Performance Steps:

1. Validate equipment fielding requirements.
2. Review fielding documents.
3. Assist in fielding plan.
4. Coordinate placement of equipment into service.
5. Monitor completion of administrative functions.

References:

1. MCO P4790.2
2. Applicable Technical Information
3. Applicable Unit Logistics Support Summary (ULSS)
4. MCO 4420.15
5. MCO 8300.1
6. MCO 4400.82
7. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-ADMN-2021: Identify the phases in the acquisition process

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), and equipment records.

Standard: Ensure equipment fielding is supported and accomplished per the mission requirements and references.

Performance Steps:

1. Identify lifecycle milestones in the acquisition process.
2. Identify types of acquisition.

References:

1. TM 4420-15/1
2. MCO 4105 Series
3. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

FUNCTIONAL AREA: TECHNICAL FUNCTIONS

2181-TECH-2031: Monitor unit arms, ammunition, and explosives (AA&E) programs

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references automated systems with internet access, Table of Organization & Equipment (T/O&E), equipment, equipment records, and ground ordnance equipment storage facilities.

Standard: Ensure security procedures for safeguarding ground ordnance equipment per the mission requirements and references.

Performance Steps:

1. Determine security requirements for ordnance equipment on-hand, to include arms, ammunition and explosives assets.
2. Validate the established security procedures.
3. Coordinate with local PMO, to evaluate the facility for compliance with physical security standards.
4. Ensure security personnel are trained in AA&E procedures.

References:

1. MCO P5530.14
2. OPNAVINST 5530.13
3. OPNAVINST 5530.14
4. MCO 5500.6
5. MCO P4400.150
6. MCO 8300.1
7. MCO 4340.1
8. Current ALMARs
9. Current MARADMINs
10. Applicable Technical Information
11. Local Policies and Procedures
12. Table of Organization & Equipment (T/O&E)

Administrative Instructions: See Administrative Notes, para 17020.

2181-TECH-2032: Provide technical supervision for the repair of ground ordnance equipment

Initial Training Setting: FS

Sustainment Interval: 24

Grade: MSgt, MGySgt

Condition: Given the references, automated systems with internet access, Table of Organization & Equipment (T/O&E), personnel, personnel records, equipment, equipment records, and maintenance facilities.

Standard: Ensure maintenance of ordnance equipment is accomplished per the mission requirements and references.

Performance Steps:

1. Anticipate requirements.
2. Identify deficiencies.
3. Identify maintenance solutions.
4. Supervise maintenance.
5. Supervise maintenance personnel.
6. Ensure safety of personnel.
7. Supervise completion of administrative functions.

References:

1. MCO 4790.2
2. Applicable Technical Information
3. TM 4700.15/1
4. Table of Organization & Equipment (T/O&E)

Administrative Instructions: This task includes ground ordnance weapons, artillery and electro-optical equipment and the Universal Needs Statement (UNS). See Administrative Notes, para 17020.

APPENDIX A

REFERENCES

References are doctrinal publications, technical manuals, and other publications upon which Individual or Collective Training Standards and their performance steps are based. They should be readily available and provide the detailed procedures for accomplishing the task. This section includes a list of reference publications and their titles associated with tasks in Ground Ordnance Maintenance Occupational Field.

REFERENCE	TITLE
ANSI Z136.1	Laser Safety Standards
CFR 1910.1200	Occupational Safety and Health Standards, Hazard Communication
DOD 4160.21-M-1	Defense Demilitarization Manual
DOD INST 6050.5	DOD Hazard Communication Program
DOD INST 6055.11	Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers
FM 11-60	Basic Principles of Direct Current
FM 11-61	Basic Principles of Alternating Current
FM 11-62	Solid State Devices/Solid State Power Supply
FM 11-72	Communications-Electronics Fundamentals
FM 20-22	Recovery Vehicle Operations
FM 23-65	Browning Machinegun, .50-Caliber HB, M2
FM 31-70	Basic Cold Weather Manual
FM 31-71	Northern Operations
FM 31-76	Mountain Operations
FM 5-553	General Drafting
FM 9-243	Use And Care of Hand Tools And Measuring Tools
FMFM 2-6	MAGTF Rear Area Operations
FMFM 4-3	MAGTF Landing Support Operations
FMFM 6-5	Marine Rifle Squad
FMFM-6	Ground Combat Operations
FMFRP-4-34	Recovery and Battlefield Damage Assessment and Repair
LI 08594A-12/1B	Lubrication Instructions, LAV-25 Turret
LI 08594A-12/2A	Lubrication Instructions, Auto-Hull LAV-25
LI 08650A-12A	Lubrication Instructions, LAV-Command & Control
LI 08651A-12A	Lubrication Instructions, LAV-Recovery
LI 08652A-12/1B	Lubrication Instructions, LAV-Anti-Tank Turret
LI 08652A-12/1C	Lubrication Instructions, LAV-Anti-Tank Auto/Hull
LI 08654A-12	Lubrication Instructions, LAV-Logistics
LI 08655A-12A	Lubrication Instructions, LAV-Mortar
LI 08953A-12	Lubrication Instruction, Tank, Combat, Full-Track: 120-mm Gun, M1A1
LI 09999A-12	Lubrication Instructions, LAV-MEWSS
LO 5-5420-202-12	Lubrication Order, Launcher, M60A1 Tank Chassis, Transporting: For Bridge, Armored-Vehicle-Launched:

	Scissoring Type, Class 60
LO 9-1025-211-13	Howitzer, Medium Towed, 155MM M198
LO 9-2350-256-12	Lubrication Order for Recovery Vehicle, Full-Trackd Medium, M88A2
MCBUL 3000	Table of MARES Logistics Reportable Equipment
MCBUL 8011	Class V(W) Materiel Allowances for Training and Security
MCDP 1-3	Tactics
MCDP 4	Logistics
MCI 13.34	Math for Marines
MCI 28.20	Electronics Mathematics for Marines
MCI 28.6	Fundamentals of Digital Logic
MCO 1510.34	Individual Training Standards System (ITSS)
MCO 1510.65B	ITS for Ordnance Maintenance Occfld 21, Vol 1
MCO 1510.66	ITS for Ordnance Maintenance Occfld 21, Vol 2
MCO 1510.67	Individual Training Standards (ITS) System for Ordnance Maintenance Occupational Field 21
MCO 1510.78	ITS for Ammo and Explosives Ordnance Disposal Occfld 23
MCO 1553.2	Management for Marine Corps Formal Schools and Training Centers
MCO 1553.3	Marine Corps Unit Training Management
MCO 1650.17	Marine Corps Military Incentive Awards Program
MCO 3000.11	Marine Corps Automated Readiness Evaluation System
MCO 3501.7	Marine Corps Combat Readiness Evaluation System
MCO 3591.14	Use of Service Weapon in Competition
MCO 4030.16	Marine Corps Packing and Packing Maintenance of Small Arms
MCO 4030.19	Special Provisions
MCO 4030.25	Storage and Supply Activities
MCO 4030.25	Responsibilities for Technical Escort of Dangerous Materials
MCO 4030.33	Packaging of Materiel
MCO 4030.36	Marine Corps Packing Manual
MCO 4105.2	Marine Corps Warranty Program
MCO 4110.2	Management and Execution of Integrated Logistics Support for Ships, Systems and Equipment
MCO 4340.1	Reporting Missing, Lost, Stolen, or Recovered Government
MCO 4340.1	Reporting Of Missing, Lost, Stolen, or Recovered (MLSR) Government Property
MCO 4400.150	Consumer Level Supply Policy Manual
MCO 4400.16	Uniform Materiel Movement And Issue Priority System
MCO 4400.82	MIMMS Controlled Item Management Manual
MCO 4450.12	Storage And Handling of Hazardous Materials
MCO 4600.25	Transportation and Traffic Management
MCO 4600.30	Use of Intermodal Containers, Special Purpose Vans, and Tactical Vehicles
MCO 4610.15	Shipment of Military Equipment, Explosives and other Dangerous Articles
MCO 4710.8	Uniform Criteria for Repair Cost Estimates

MCO 4733.1	Marine Corps Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Maintenance Program (CAMP)
MCO 4790.18	Corrosion Prevention and Control (CPAC) Program
MCO 4790.2	MIMMS Field Procedures Manual
MCO 4790.2	NFPA Standards Manual
MCO 4855.10	Product Quality Deficiency Report (PQDR)
MCO 5100.19	Marine Corps Drive Safe Order
MCO 5100.29	Marine Corps Safety Program
MCO 5100.30	Marine Corps Order on Off-duty/Recreation Safety
MCO 5100.8	Marine Corps Ground Occupational Safety and Health (OSH) Program
MCO 5104.1	Marine Corps Laser Hazard Control Program
MCO 5104.1A	Military Exempt Laser Inventory
MCO 5104.2	Marine Corps Radiofrequency Electromagnetic Field Personnel Protection Program
MCO 5104.3	Marine Corps Radiation Safety Program
MCO 5215.1	Marine Corps Directive
MCO 5215.17	The Marine Corps Technical Publications System
MCO 5311.1	Total Force Structure Process (TFSP)
MCO 5500.6	Arming of Security and Law Enforcement Personnel and the Use of Force
MCO 5530.13	Physical Security Instruction for Conventional Arms, Ammunition, and Explosives (AA&E)
MCO 5530.14	Physical Security and Loss Prevention Manual
MCO 5600.31	Marine Corps Publications and Printing
MCO 6260.1	Marine Corps Hearing Conservation Order
MCO 8010.1	Class V(W) Planning Factors for Fleet Marine Force Combat Operations
MCO 8020.10	Safety, Ammunition and Explosives Safety Policies, Programs, Requirements and Procedures for Class V Material
MCO 8025.1	Class V(W) Malfunction and Defect Reporting
MCO 8300.1	Marine Corps Serialized Control of Small Arms System
MCO 8373.2	Auth ALW Maint & Acct Rifle/Pistol
MCO 8400.6	Licensing Procedures for Ordnance Vehicle Operations
MCO P1070.12	Marine Corps Individual Records Administration Man....
MCO P11240.106	Garrison Mobile Equipment
MCO P11262.2	Inspection, Testing, and Certification of Tactical Ground Load Lifting Equipment
MCO P1200.7	MOS Manual
MCO P4400.105	Radioactive Commodities in the DOD Supply Systems
MCO P4400.150	Consumer-Level Supply Policy Manual
MCO P4400.82	MUMMS Controlled Items Management Manual
MCO P4600.14	Containerization Policy
MCO P4610.19	Commercial Service Plan
MCO P4790.1	Marine Corps Integrated Maintenance Management System (MIMMS) Introduction Manual
MCO P4790.2	Marine Corps Integrated Maintenance Management System (MIMMS) Field Procedures Manual

MCO P4790.3	MIMMS Depot Policy Manual
MCO P5090.2	Environmental Compliance and Protection Manual
MCO P5100.8	Marine Corps Occupational Safety and Health Program Manual
MCO P5102.1	Marine Corps Ground Mishap Investigation and Reporting Manual
MCO P5215.1	USMC Directives System
MCO P5215.17	The Marine Corps Technical Publications System
MCO P5530.14	Marine Corps Physical Security Program Manual
MCO P5600.31	Marine Corps Publication Printing Regulations
MCO P7100.8	Field Budget Guidance Manual
MCPEL CD	Marine Corps Publications Electronic Library
MCRP 3-0A	Unit Training Management Guide (FMFM 0-1)
MCRP 3-0B	How to Conduct Training (FMFM 0-1A)
MCRP 3-0A	Unit Training Management
MCRP 3-0B	How to Conduct Training
MCWP 3-1	Ground Combat Operations
MCWP 3-11.3	Scouting and Patrolling
MCWP 4-1	Logistics Operations
MCWP 4-11	Tactical-Level Logistics
MCWP 4-24	Maintenance Operations
MIL-HDBK-61A(SE)	Configuration Management Guidance
MIL-STD-2549	DOD Configuration Management
NAVFAC P307	Management of Weight Handling Equipment
NAVMC 2692	Unit Safety program Management Manual
NAVMC 2706	Apprenticeship Program
NAVMC 2761	Catalog of Publications
OPNAV 4790.2	Naval Aviation Maintenance Program
OPNAVINST 5530.13	Physical Security Instruction for Conventional Arms, Ammunition, and Explosives (AA&E)
OPNAVINST 5530.14	Navy Physical Security Manual
P5600.31	Marine Corps Publications and Printing Regulations
SC 4931-95-CL-J54	Purging Kit, Fire Control
SC 4940-95-CL-B02	Shop Equipment Semi-Trailer Mounted
SC 518-95-CL-A07	Small Arms Repairer Tool Kit
SECNAVINST 5210.11	Naval Correspondence
SECNAVINST 5214.10	Naval Correspondence
SECNAVINST 5216.5	Department of the Navy Correspondence Manual
SL 1-2	Index of Authorized Publications for Equipment Support
SL 1-3	Index of Authorized Publications for Equipment Support
SL-3 08721A	Tool Kit, Armor LAV-25
SL-3 08723A	Tool Set, F/M242 25mm Cannon
SL-3 08894A	Tool Kit, Organizational Maintenance, 2nd Echelon
SL-3 08895A	Tool Kit, Intermediate Maintenance, LAV
SL-3 08896A	Tool Kit, Maintenance, 4th Echelon, LAV
SL-3 10262A	GPIA LAV Electronics System Test Set
SL-3-00456A	Tool Kit, General Mechanic's

SL-3-00607A	Tool Kit, Small Arms Repairer
SL-3-03533A	Tool Set, Wrench Impact
SL-3-07769B	Recovery Vehicle, Full-Track, Medium M88A2
SL-3-07928A	Tool Set, Organizational Maintenance 2nd Echelon, M88A2, Recovery Vehicle, Full-Track
SL-3-08121	Test Set, Night Vision Sight AN/TAM-3B
SL-3-08594A	Stock list, LAV-25
SL-3-08940A	Launcher and M60A1 Tank Chassis, Transporting for Bridge, Armored Vehicle Launched (AVLB) Scissoring Type
SL-3-08953A	Tank, Combat, Full-Track 120mm Gun, M1A1
SL-3-09561A	Tool Set, M1A1 Tank, Hull, & Turret, 2nd Echelon
SL-3-09590A	Analyzer Set, Vehicular (STE-M1)
SL-3-10025A	Tool Set, Common No. 1, Tactical Vehicles Organizational Maintenance, Second Echelon
SL-4 08594A	Stock list, Repair Parts, LAV-25
SL-4 08650A	Stock list, Repair Parts, LAV-C2
SL-4 08651A	Stock list, Repair Parts, LAV-Recovery
SL-4 08652A	Stock list, Repair Parts, LAV-Anti Tank
SL-4 08653A	Stock list, Repair Parts, LAV-Air Defense
SL-4 08654A	Stock list, Repair Parts, LAV-Logistics
SL-4 08655A	Stock list, Repair Parts, LAV-Mortar
SL-4 09999A	Stock list, Repair Parts, LAV-MEWSS
SL-4-8H161B	Light Armored Vehicle (LAV) Thermal Sight System
TB 9-1000-247-34	Overseas Shipment of Small Arms
TC 0-237	Welding Theory and Application
TI 00526A-25/2B	Match Condition
TI 10340-15/1C	Fuel Requirements, Authorized Fuel for Engine
TI 2320-15/55B	Deadline Criteria
TI 4710-14/1	Recovery and Evacuation Criteria
TI 4731-14/1C	The U.S. Marine Corps Oil Analysis Program
TI 4733-15/1	Calibration Requirements Marine Corps TMDE Calibration and Maintenance Program
TI 4733-15/1	Calibration Requirements Marine Corps TMDE Calibration
TI 4733-15/11	Infantry Weapons Gauge Calibration Exchange Program
TI 5104-15/1	Proc Pub Index RADL SAF Affairs Program
TI 5104-15/2	Special Handling of Tritium Fire Control Instruments
TI 5600-15/7	Publication Information Marine Corps Equipment
TI 8005-24/20	Pre-Fire Inspection Small Arms Weapon Ordnance Material
TI 8005-24/20E	Trigger Weight Measurements and PFI
TI 8005-25/12	Maintenance Sub-Merged Ordnance Combat Vehicle
TM 00526a-10/1	Operations Manual for the MEU(SOC) Pistol
TM 00640A-13	MS, Pullover Gage, Complete (KIT)
TM 00999-23	Recoil Exercise for M198 155mm Howitzer
TM 02498A-23	M2 Gun, Machine
TM 05538C-23	Rifle, 5.56-mm, M16A2 W/E
TM 05539C-23	M40A1 Sniper Rifle 7.26

TM 05539D-24	Sniper Rifle, 7.62 M-40A3
TM 0726678-25	AAV, Command, Model 7A1, AAVC7A1
TM 07267B-10	Assault Amphibious Recovery Vehicle, 7A1
TM 07267B-10A/1A	Operator's Manual, AAVR7A1 Recovery Vehicle
TM 07267B-25	AAV, Recovery Model 7A1 AAVR7A1
TM 07268-10A/1A	Operator's Manual, AAVC7A1 Command Vehicle
TM 08206A-23	Lightweight Company Mortar 60MM, M224
TM 08521A-23	Machine Gun 40MM MK19 MOD 3
TM 08552A-13	Maintenance Manual for Borescope M3
TM 08579A-12/1	Operator and Organizational Maintenance Instruction
TM 08579A-24P/3A	Modular Universal Laser Equipment
TM 08579A-34/2A	AN/PAQ-3 (MULE) & Fault Isolation Test Set
TM 08594A-10/2B	Operator's Manual, Auto/Hull LAV-25
TM 08594A-10-1C	Operator's Manual, LAV-25 Turret
TM 08594A-20/3A	Light Armored Vehicle (LAV)-25 Turret
TM 08594A-20/3B	Organizational Maintenance, LAV-25 Turret
TM 08594A-20/4A	Organizational Maintenance, LAV-25 Auto/Hull
TM 08594A-34/8	Light Armored Vehicle (LAV)-25 Turret
TM 08594A-34/9	Intermediate Maintenance, LAV-25 Auto/Hull
TM 08650A-20B	Organizational Maintenance, LAV-C2
TM 08650A-34	Intermediate Maintenance, LAV-C2
TM 08651A-10A	Operator's Manual, LAV Recovery
TM 08651A-20B	Organizational Maintenance, LAV-Recovery
TM 08651A-34	Intermediate Maintenance, LAV-Recovery
TM 08652A-10/1A	Operator's Manual, LAV-AT Turret
TM 08652A-10/2A	Operator's Manual, LAV Anti-Tank Auto/Hull
TM 08652A-20/3B	Organizational Maintenance, LAV Anti Tank Turret
TM 08652A-20/4A	Organizational Maintenance, LAV Anti Tank Auto/Hull
TM 08652A-34/5	Intermediate Maintenance, Light Armored Vehicle (LAV) AT Turret
TM 08652A-34/5A	Intermediate Maintenance, LAV Anti Tank Turret
TM 08652A-34/6A	Intermediate Maintenance, LAV Anti Tank Auto/Hull
TM 08653A-10/1	Operator's Manual, LAV-Air Defense
TM 08653A-20	Organizational Maintenance, LAV-Air Defense
TM 08653A-20/2	Organizational Maintenance, LAV Air Defense Auto/Hull
TM 08653A-34/3	Intermediate Maintenance, LAV Air Defense Auto/Hull
TM 08654A-10A	Operator's Manual, LAV Logistics
TM 08654A-20B	Organizational Maintenance, LAV-Logistics
TM 08655A-10A	Operator's Manual, LAV-M
TM 08655A-20B	Organizational Maintenance, LAV-Mortar
TM 08655A-34	Intermediate Maintenance, LAV-Mortar
TM 08671A-23/2A	Machine Gun 5.56MM M249
TM 08672A-20/1	Maintenance Manual, 25mm Auto Chain Gun
TM 08672A-30	Maintenance Manual, 25mm Automatic Chain Gun
TM 08673A-25	Launcher, Assault Rocket 83mm (SMAW)

TM 08911A-12/1	North Finding Module MX-18204/GSQ
TM 08911A-34	North Finding Module MX-18204/GSQ
TM 08953A-10	Operator's Manual, Operator Controls, PMCS, and Operation Under Unusual Conditions for Tank, Combat, Full-Track: 120mm Gun, M1A1 General Abrams, Vols. 1-2
TM 08953A-20-2	Unit Troubleshooting Manual for Tank, Combat, Full-Track: 120mm Gun, M1A1 General Abrams (Hull), Vols. 1-5
TM 08953A-20-3	Unit Troubleshooting Manual for Tank, Combat, Full-Track: 120mm Gun, M1A1 General Abrams (TURRET), Vols. 1-4
TM 08953A-24/4-2	Tank, Combat, M1A1 (Turret)
TM 08953A-24-1	Unit, Intermediate Direct Support and Intermediate General Support Maintenance Manual Systems Schematics for M1A1
TM 08953A-24P-2	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List for M1A1 Turret
TM 08953A-34/7-1	M1A1 Tank Fire Control
TM 08953A-34	Intermediate Direct Support and Intermediate General Support Maintenance Manual for M1A1 Turret, Vols. 1-2
TM 08953A-34P/8	M1A1 Tank Sighting & Fire Control
TM 09629A-23&P/2A	SASR, .50 Caliber M82
TM 09674A-10/3A	Operator's Manual with Components List, Amphibious Assault Vehicle/FOV
TM 09674A-25&P/2	AAV Special Mission Kits w/Ch 1
TM 09674A-25&P/4	Assault Amphibious Vehicle, 7A1 Family of Vehicles
TM 09688A-24&P	Receiver Infrared, AN/PAS-18
TM 09870A-10/1	Operation Instructions for the Remote Sensing Chemical
TM 09870A-23&P/2	Maintenance Instructions for the Remote Sensing
TM 09922A-23&P/2	81MM Mortar M252
TM 09962A-10/1	Operator's Manual, MK 154 Line Charge
TM 09962A-13&P/2	MK 154 Mine Charge Kit
TM 0999914/1	Organizational Maintenance, LAV-MEWSS
TM 09999A-10/2	Operator's Manual, LAV MEWSS
TM 09999A-14	MEWSS
TM 10004-10	AAV Up-Gunned Weapons Station
TM 10004A-25&P2	AAV Up-Gunned Weapon Station
TM 1005A-23&P/2A	Pistol Semiautomatic 9MM M9
TM 10152A-24&P	M3P 50 Caliber Machine Gun
TM 10209-10/1	Use and Care of Hand and Measure Tools
TM 10262A-14&P/1	GPIA-LAV Electronic System Test Set
TM 115820-890-10	Operator's Manual, SINCGARS Ground, Combat Net Radio, ICOM
TM 2590/23&P/2	Mine Clearing Blade, Abrams Tank
TM 2590-10/1	Operator's Manual, Blade, Mine Clearing
TM 4700-15/1	Ground Equipment Record Procedures Manual
TM 4795-12/1	Organizational Corrosion Prevention and Control Procedures
TM 4795-12/1	Organizational Corrosion Prevention and Control Procedures.
TM 4795-34	Rust Proofing and Underbody Coating Procedures for Tactical Vehicles

TM 5-5420-202-10	Operator's Manual, Launcher, M60A1 Tank Chassis, Transporting: For Bridge, Armored-Vehicle-Launched, Scissoring Type, Class 60
TM 5-5420-202-20	Organizational Maintenance Manual for M60A1, AVLB, Armored Vehicle Launcher Bridge, Vols. 1, 2, 3, and 4
TM 5-5420-202-24P	Organizational Maintenance Repair Parts and Special Tools List for M60A1, AVLB, Armored Vehicle Launcher Bridge
TM 5-5420-202-34	Direct Support and General Support Maintenance M60A1 Tank Chassis Transporting: For Bridge, Armored-Vehicle-Launched, Scissoring Type, Class 60
TM 5-5420-203-14	Maintenance Manual, Operator's, Unit, Direct Support, and General Support Bridge, Armored-Vehicle-Launched, Scissoring Type; Class 60 and Class 70 Aluminum; 60 Ft Span
TM 5-5420-203-24P	Organizational, Direct Support, and General Support RPSTL for Bridge, Armored-Vehicle-Launched, Scissoring Type, Class 60, Aluminum 60 Ft Span; For Use with M48 & M60 Launched
TM 5-5420-228-24	M60 Tank Chassis, Transporting: For Bridge Armored-Vehicle-Launched Scissoring Type, Class 60
TM 750-116	General Procedures for Purging and Charging of Fire Control Instruments
TM 8-F152B-25	AAV Power Plant Assembly
TM 8-H161B-20	Light Armored Vehicle (LAV) Thermal Sight System
TM 9-1000-202-14	Evaluation of Cannon Tubes
TM 9-1005-13	Machine Gun Mounts
TM 9-1005-211	Pistol, CA Automatic, M1911A1 w/Holster
TM 9-1005-213-10	Machine Gun, .50-Caliber Browning, M2, Heavy Barrel, Flexible
TM 9-1010-221-24	M203 Grenade Launcher
TM 9-1025-211-10	Organizational Maintenance Manual, Howitzer, Medium, Towed, M198 155MM
TM 9-1025-211-20	Howitzer Med Towed 155mm M198
TM 9-1200-206-34	Intermediate Direct Support and Intermediate General Support Maintenance Manual Vol. 1 of 3 for M1 and M1A1 Sighting and Fire Control
TM 9-1200-206-34	Direct Support and General Support Repair Parts and Special Tools List for M1, IPM1, and M1A1 Sighting and Fire Control Components
TM 9-1425-450-12	Tow Weapon System Guided Missile System
TM 9-1425-450-24	Launcher, Tubular Guided Missile
TM 9-1425-450-34	Tow 2 Weapon System M220E4
TM 9-1425-450-L	(LOAP) F/TOW 2 Weapons System
TM 9-1425-451-34	Tow 2 Weapon System Checkout and Troubleshooting
TM 9-207	Oil Analysis Sampling Valve
TM 9-2350-256-10	Operator's Manual, Recovery Vehicle Medium M88A2
TM 9-2350-256-20	Organizational Maintenance Manual for Recovery Vehicle, Full-Track; Medium, M88A1
TM 9-2350-256-24	Organizational Maintenance Repair Parts and Special Tools List for Recovery Vehicle, Full-Track: Medium, M88A2
TM 9-2350-256-34	Direct Support and General Support Maintenance Manual for Recovery Vehicle, Full-Track; Medium, M88A2

TM 9-2350-292-10	Operator's Manual for Recovery Vehicle, Heavy,
TM 9-2350-292-20	Unit Maintenance Manual for Recovery Vehicle, Full- Tracked, Heavy, M88A2
TM 9-2350-292-24	Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools
TM 9-237	Welding Theory and Application
TM 9-243	Use and Care of Hand Tools and Measuring Tools
TM 9-254	General Maintenance Procedures for Fire Control Materials
TM 9-2540-205-24	Heaters, Vehicular Compartment
TM 9-258	Application-Fire Control Instruments
TM 9-2835-255-34	Intermediate Direct Support and Intermediate General Support Maintenance Manual, Turbine Engine, Field Service Model AGT 1500
TM 9-3419-224-10	Operators Manual, Saw, Band Metal Cutting
TM 9-4910-571-12	Operator's and Organizational Maintenance Manual
TM 9-4910-741-14	STE M1/FVS
TM 9-4931-586-12	Operations, Maintenance, and Parts Manual for Test Set, Direct Support Electrical System Test Set for AN/USM-615
TM 9-4933-201-15	Pump Kit Hydraulic Oil Gun
TM 9-4933-258-13	Pullover Gage Kit
TM 9-4935-450-24	Shop Equipment, GMS Contact Support Set
TM 9-4935-452-24	Tow Field Test Set, TFTS Test Adapter
TM 9-4935-455-14	Tow 2 Heavy Antitank/Assault Weapons Systems
TM 9-4940-559-14	Shop Equipment, General Purpose Repair Semi-Trailer Mounted, Model SEGPRSM
TM 9-5855-255-24	Night Vision Sight AN/TAM-3/3A/3B
TM 9-6115-542-24	External Auxiliary Power Unit
TM 9-6650-235-13	M3 Bore scope
TM 9999-15/1	Electrostatic Discharge (ESD) Awareness
UM 4400-124	FMF SASSY Using Unit Procedures
UM 4400-15	Organic Property Control Procedures
UM 4790-5	MIMMS AIS Field Maintenance Procedures
UM MCPDS	Marine Corps Publications Distribution System
UM PLMS	Publication Library Management System

ADDITIONAL REFERENCES

Applicable Modification Instructions (MI's)
 Applicable Stock Lists
 Applicable Table of Equipment (T/E)
 Applicable Table of Organization (T/O)
 Applicable Technical Information
 Applicable Technical Manuals
 Applicable Unit Logistics Support Summary (ULSS)
 ATLASS II+ User's Manual
 Current ALMARS

Current MARADMINS

DLA Handbook

DMR Build Procedures

Machinist Handbook 26th Edition

Marine Corps Logistics Chain Analysis Team (MCLCAT) Checklist